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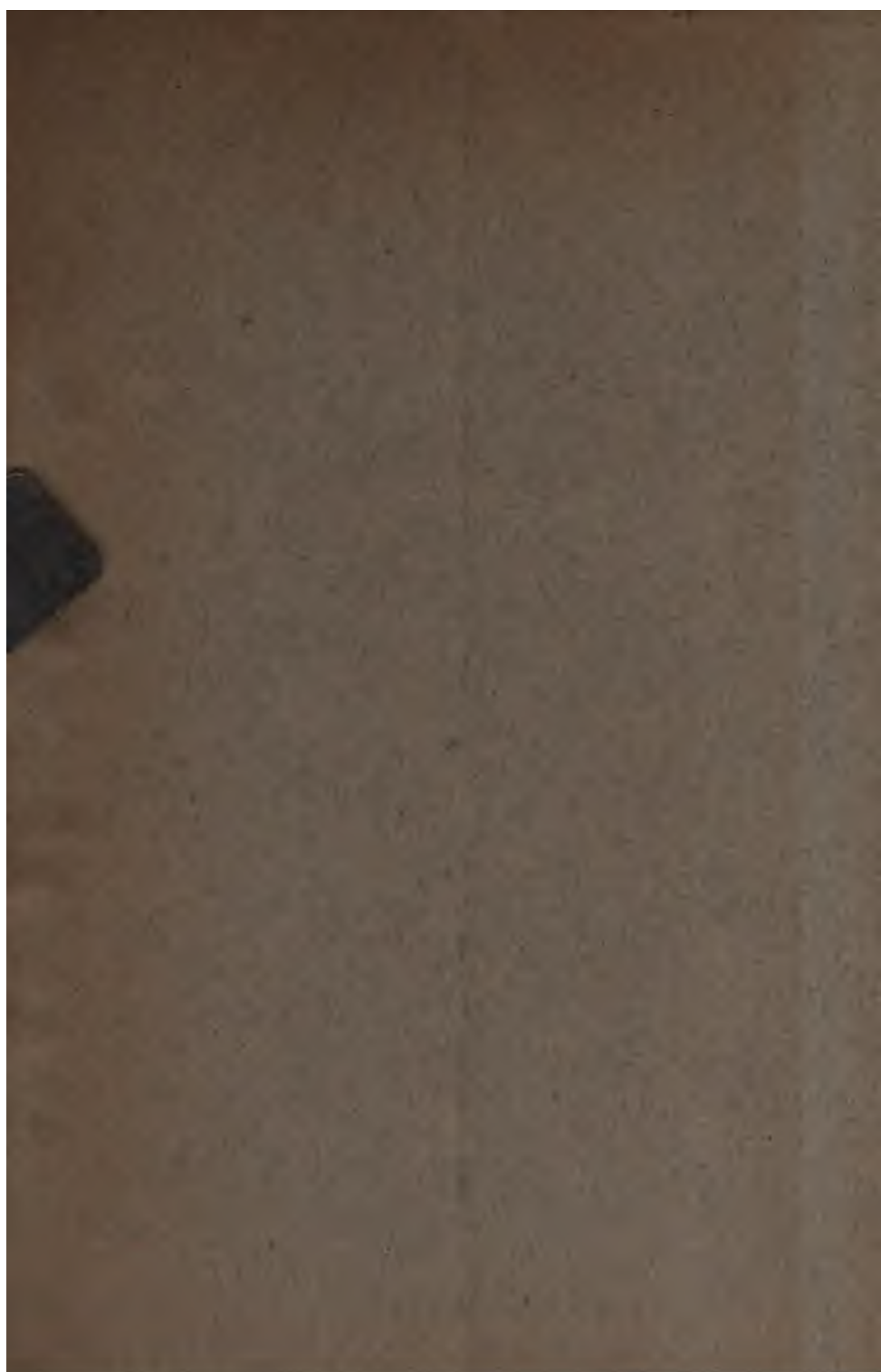
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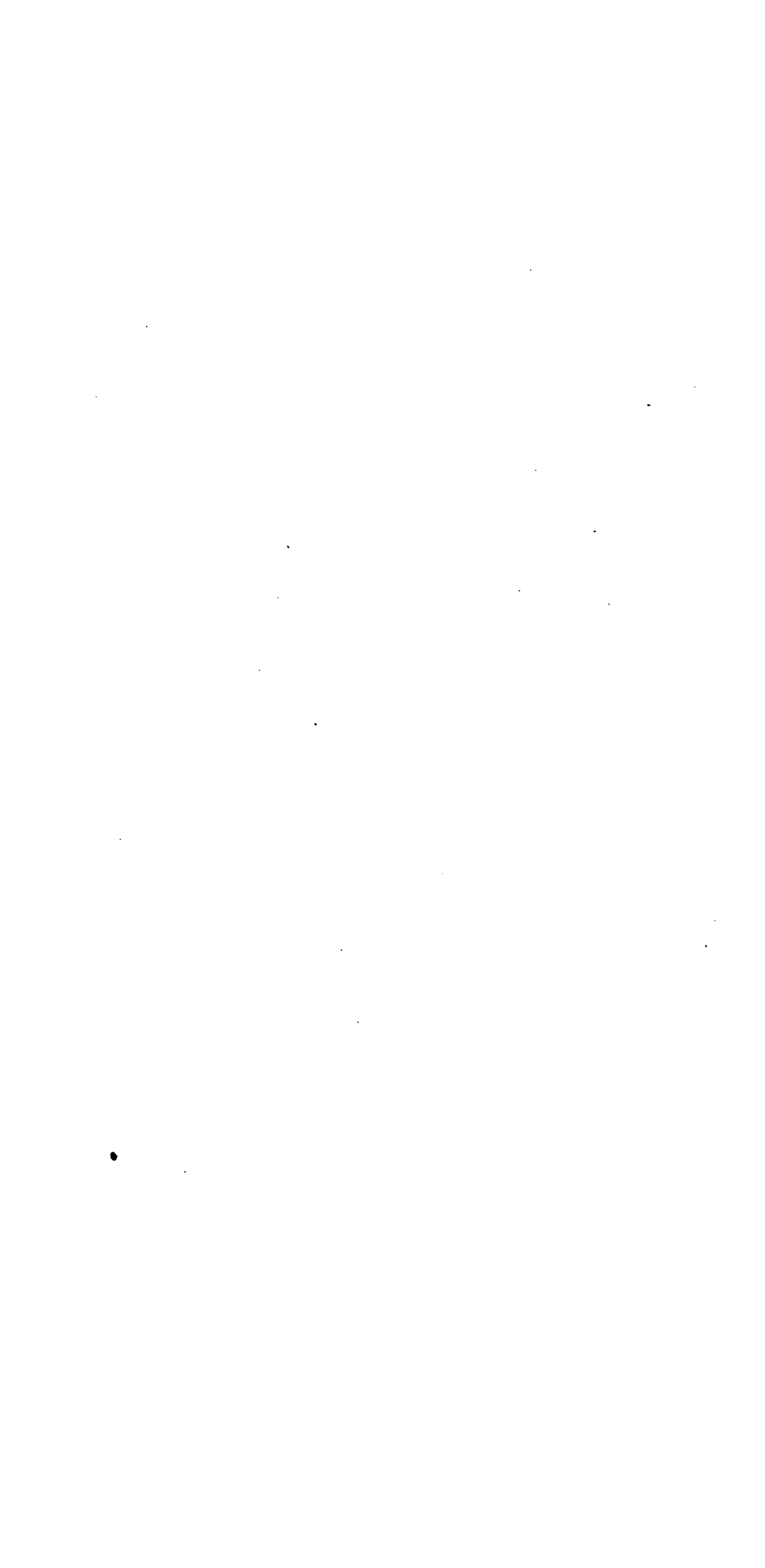
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TENTH ANNUAL REPORT  
OF THE  
DEPARTMENT OF  
PUBLIC WORKS

TO THE  
CITY COUNCIL OF THE CITY OF CHICAGO,  
FOR THE

Fiscal Year Ending December, 1885.

DUP. EXCHANGE. 6 FEB. 1900  
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CHICAGO:  
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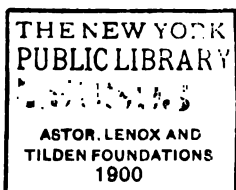
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# Department of Public Works.

CITY OF CHICAGO.

COMMISSIONER,  
DEWITT C. CREGIER.

SECRETARY,  
D. S. MEAD.

## Heads of Bureaus.

### ENGINEERING:

CITY ENGINEER, . . . . . S. G. ARTINGSTALL.

### SEWERS:

SUPERINTENDENT, . . . . . O. H. CHENEY.

### STREETS:

SUPERINTENDENT, . . . . . L. A. McGANN.

### SPECIAL ASSESSMENTS:

SUPERINTENDENT, . . . . . H. J. JONES.

### WATER RATE COLLECTIONS:

SUPERINTENDENT, . . . . . J. P. HAND.

### MAPS:

SUPERINTENDENT, . . . . . F. A. DEMMLER.

### ACCOUNTS:

|  |                  |
|--|------------------|
| DEPARTMENT BOOK-KEEPER, . . . . .                    | F. C. MEYER.     |
| CHIEF CLERK WATER RATES, . . . . .                   | E. E. GILBERT.   |
| WATER RATE ASSESSOR, . . . . .                       | T. PATTISON.     |
| WATER PERMIT CLERK, . . . . .                        | H. G. NAPER.     |
| CASHIER WATER RATES, . . . . .                       | J. W. LYONS.     |
| REGISTRAR WATER RATES, . . . . .                     | W. S. MAHER.     |
| METER RATE CLERK, . . . . .                          | W. H. REED.      |
| IN CHARGE OF PRIVATE DRAINS, . . . . .               | B. F. DAVENPORT. |
| ENGINEER IN CHARGE NORTH PUMPING WORKS, . . . . .    | F. TRAUTMANN.    |
| ENGINEER IN CHARGE WEST PUMPING WORKS, . . . . .     | H. MASON.        |
| ENGINEER SOUTH BRANCH RIVER PUMPING WORKS, . . . . . | H. WELCH.        |
| ENGINEER NORTH BRANCH RIVER PUMPING WORKS, . . . . . | W. J. TURNBULL.  |
| SUPERINTENDENT WATER METERS, . . . . .               | G. J. BAKER.     |
| BRIDGE REPAIRS, . . . . .                            | G. R. BRAMHALL.  |
| LAKE CRIB KEEPER, . . . . .                          | C. McKEE.        |



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REPORT  
OF THE  
COMMISSIONER OF PUBLIC WORKS  
CITY OF CHICAGO.

---

OFFICE OF THE COMMISSIONER, }  
CITY HALL, January 23, 1886. }

*To the Honorable the Mayor and City Council of the  
City of Chicago:*

GENTLEMEN:—I respectfully submit the following record relating to the Public Works of the City during the year ending December 31, 1885, being the Tenth Annual Report of this Department, and the Thirty-Second Annual Report that I have had the honor to present during my official connection with the City Government.

A summary of the additions and improvements made during the year under the jurisdiction and supervision of this Department may be found tab-

ulated upon the pages immediately following, while a more extended reference to the transactions of the Department, and other matters of interest relating to this branch of the public service, will be found in the succeeding pages under appropriate headings. For minute details of the work prosecuted during the year reference may be had to the reports of the several bureaus constituting this Department, which are herewith appended, and form a part of this general report :

#### EXTENSION OF WATER SYSTEM.

|       |   |        |
|-------|---|--------|
| 21    | 8-10 miles of water pipe, from 4 to 24 inches diameter, have been added during the year, making a total in use at the close of the year.. | 565    |
| 174   | new water valves have been added; total in use.....   | 4,196  |
| 327   | new fire hydrants have been added; total in use.....  | 4,943  |
| 8     | fire cisterns have been added; total in use..   | 34     |
| 8,407 | new house service taps have been added; total in use.....   | 98,688 |
| 6,555 | new house service pipes have been added; total in use.....  | 98,688 |
| 212   | new water meters have been added; total in use.....   | 2,897  |
| 32    | new water motors; total in use.....   | 477    |
|       | Number of service taps inserted in water mains  | 8,407  |

The revenue collected for water measured by meters and used by hydraulic elevators during the

year is \$455,862.29, being an increase of \$47,796.40 over the amount collected for same purpose the previous year.

There was furnished to the city during the year 33,451,386,865 gallons of water, a daily average of over 91,647,632 gallons.

#### EXTENSION OF SEWERAGE SYSTEM.

|   |           |
|---|-----------|
| 22 miles of brick and pipe sewers, from 12 inches to 9 feet in diameter, have been constructed during the year, making a total in use at close of year..... | 436 miles |
| 796 new catch-basins have been added; total in use.....   | 13,744    |
| 854 man-hole chambers have been added; total in use.....  | 15,582    |
| Old catch-basins raised to grade.....   | 1,693     |
| Old man-hole chambers raised to grade.....  | 1,171     |
| Old catch-basins and man-holes repaired....   | 222       |
| Number of catch-basins cleaned.....   | 15,451    |
| Sewers cleaned.....   | 284 miles |
| House-drains laid.....  | 11 miles  |

#### STREET IMPROVEMENTS.

There were 800,877.79 square yards, or 37.71 miles of roadway paved during the past year.

There were 46,501 square yards of street pavement repaired; 0.17 miles of streets planked.

There were 79,799 square yards of pavement laid by Street Railway Companies in the streets occupied by their tracks.

|   |              |
|---|--------------|
| Total number of miles of paved streets        |              |
| in the city to date.....                      | 245.96 miles |
| New sidewalks constructed.....                | 34.70 "      |
| Sidewalks reconstructed.....                  | 80.25 "      |
| Sidewalks repaired.....                       | 43.82 "      |
| Total sidewalks in the city.....              | 838.76 "     |
| Streets cleaned.....                          | 2,626.47 "   |
| Number of aprons, crossings, culverts, etc.,  |              |
| built.....                                    | 6,924        |
| Street lamps erected (gas).....               | 876          |
| Street lamps erected (oil).....               | 1,161        |
| Total number of street lamps in the city..... | 18,210       |
| Street lamps repaired.....                    | 23,842       |
| Number of buildings removed.....              | 693          |

#### MAPS AND PLATS MADE.

|   |              |
|---|--------------|
| For new sub-divisions.....                  | 162          |
| For opening, widening and vacating streets  |              |
| and alleys.....                             | 123          |
| For special assessments, Street and Law De- |              |
| partments.....                              | 1,991        |
| For miscellaneous purposes.....             | 48           |
| Total plats made.....                       | <u>2,324</u> |



## SPECIAL ASSESSMENTS PREPARED.

|  |           |
|--|-----------|
| For improvement of streets and alleys..... | 172       |
| “ private drains.....                      | 96        |
| “ water service pipes.....                 | 106       |
| “ street and alley openings.....           | 13        |
| “ for new sidewalks.....                   | 232       |
| “ gas lamps.....                           | 111       |
| “ oil lamps.....                           | 51        |
| Total.....                                 | <hr/> 781 |

## MISCELLANEOUS WORK.

An iron double roadway viaduct over railroad tracks on West Adams street.

Completing entrances to the City Hall.

New iron double roadway swing bridge across the river at Lake street.

Superstructure of bridge across the South Branch Canal of the Chicago River at Ashland Avenue.

Two Horizontal, Compound Condensing Engines and boilers for the North Pumping-Works, to be completed May 1st, 1886.

Dredging the River.

General repairs of Bridges and Viaducts.

## CONTRACTS.

The number of contracts entered into by this Department during the past year, the class of improvement, and aggregated cost of the same are as follows :

|   |                      |
|---|----------------------|
| 182 street and alley improvement contracts, aggregating.....                  | \$1,400,197 71       |
| 1 sweeping and cleaning improved streets.....                                 | 91,926 45            |
| 89 water service pipe contracts, aggregating.....                             | 35,679 80            |
| 81 private drain contracts, aggregating.....                                  | 23,483 68            |
| 7 constructing bridges and viaducts contracts, aggregating.....               | 167,182 68           |
| 12 maintenance of water system contracts, aggregating.....                    | 202,639 22           |
| 4 completion of City Hall contracts, aggregating.....                         | 29,758 00            |
| 20 construction sewers contracts, aggregating.....                            | 150,561 57           |
| 4 oak and pine lumber contracts, aggregating.....                             | 14,625 28            |
| 8 constructing engine house and police station contracts, aggregating.....    | 65,607 00            |
| 1 sewerage and water teaming contract, aggregating.....                       | 14,250 00            |
| 1 North Pumping Works, 2 new engines and boilers, contracts, aggregating..... | 93,000 00            |
| Carried forward.....  | <hr/> \$2,101,429 11 |

|   |                    |           |
|---|--------------------|-----------|
| Brought forward.....  | \$2,101,429        | 11        |
| 1 coal for Fire and Police Departments, and for Small-Pox Hospital contract, aggregating..... | 14,987             | 50        |
| 3 coal for North and West Pumping Works.....  | 109,800            | 00        |
| 1 coal for Canal Pumping Works, contract, aggregating.....                                    | 25,000             | 00        |
| 1 coal for Fullerton Avenue Pumping Works contract, aggregating.....                          | 5,589              | 00        |
| 2 coal for City Hall, Parks, etc., contracts, aggregating.....                                | 15,000             | 00        |
| 3 lamp posts, oil lamps and lighting contracts, aggregating.....                              | 85,375             | 43        |
| 2 miscellaneous contracts, aggregating.....   | 2,651              | 00        |
| <u>423 contracts, aggregating.....</u>  | <u>\$2,547,314</u> | <u>32</u> |

## FINANCIAL.

Statement showing the amount placed at the disposal of this Department, by appropriation, and from other sources, also the distribution of the same, for the past year.

|   |             |    |
|---|-------------|----|
| Balance January 1st, 1885, to credit of Water, Sewerage, City Hall and general appropriation funds..... | \$1,059,120 | 73 |
| From general appropriation for 1885..   | 1,687,103   | 50 |
| From special appropriation for cleaning streets.....  | 30,000      | 00 |
| Carried forward.....  | \$2,776,224 | 23 |



|  |             |    |
|--|-------------|----|
| Brought forward.....   | \$2,776,224 | 23 |
| From street lamps and other funds....                              | 102,667     | 45 |
| From private parties, money advanced.                              | 19,830      | 25 |
| From water revenue, including tapping<br>permits.....              | 1,364,514   | 10 |
| From drain permits and licenses.....                               | 31,344      | 69 |
| From railroad companies on account of<br>viaducts and bridges..... | 46,829      | 01 |
| From private parties for labor and mater-<br>ials.....             | 72,177      | 35 |
| From house moving permits.....                                     | 3,465       | 00 |
| From vouchers deposited back and mis-<br>cellaneous items.....     | 4,742       | 26 |
| From special assessments.....                                      | 2,889,534   | 80 |
| Total.....   | \$7,311,329 | 14 |

There has been expended from this amount as follows :

#### GENERAL APPROPRIATION, 1885.

For bridges, viaducts, dredging, street cleaning, public buildings, tunnels, canal pumping works, Fullerton Avenue pumping works, parks, work for private parties, salaries, New City Hall, constructing and maintaining sewers and catch-basins.....

\$1,963,812 66

## FROM WATER FUND.

|  |                |                |
|--|----------------|----------------|
| For water supply pipe extension.....   | \$286,831 63   |                |
| For private work by Water Department.  | 39,207 77      |                |
| For extension of West Pumping Works...   | 33,550 28      |                |
| For maintenance of water system, operating pumping works, cost of collecting taxes, and miscellaneous items.....   | 466,535 06     |                |
| For interest on water loan bonds.....  | 264,954 55     | \$1,091,079 29 |
| For street improvements, street openings, sidewalks, private drains, water service pipes and lamp posts.....   | 1,504,908 80   |                |
| For rebate, (excess of assessments over cost of improvements,) abatements to property owners doing their own work, land damages and assessments held over and annulled by Council..... | \$1,384,626 00 | \$2,889,534 80 |
| Carried forward.....   | \$5,944,426 75 |                |

Brought forward..... \$5,944,426 75

### BALANCE.

December 31, 1885, to credit of water,  
sewerage and general appropriation  
funds.....\$1,366,902 39  
Total.....\$7,311,329 14

### WATER WORKS.

The total quantity of water supplied during the year 1885 was 33,451,386,865 gallons, being an average of 91,647,632 gallons per day. During February the daily average was 101,136,176 million gallons, under a head of 107.75 feet. The greatest quantity pumped for one day during the year was 111,100,595 gallons on the 19th of February. The smallest quantity was pumped on the 22d of November, being 74,283,235 gallons, a difference of 36,817,360 gallons.

The expenses due to pumping..... \$196,795 88  
Other expenses..... 6,866 04  
\$203,661 92

### NORTH PUMPING WORKS.

(SIX ENGINES.)

The total quantity of water pumped at these works during the year was 14,004,733,925 gallons. The daily average was nearly 38 4-10 million gallons, under a head of 113 feet and a trifle over 3 2-10 millions per day less than the average of 1884.

During the month of December the daily average was nearly 43 1-10 million gallons.

|   |                     |
|---|---------------------|
| The expenses due to pumping are.....  | \$100,404 88        |
| Other expenses at these Works, such as<br>coal on hand, stores on hand and<br>general repairs, etc..... | 5,658 72            |
| Total expenditures.....   | <u>\$106,063 60</u> |

### WEST PUMPING WORKS.

(FOUR ENGINES.)

The total quantity of water pumped during the year was 19,447,521,980 gallons, being an average of 53,280,880 gallons per day, under a head of 105 feet.

|                                      |                    |
|--------------------------------------|--------------------|
| The expenses due to pumping are..... | \$96,391 00        |
| Other expenses at these Works.....   | 1,207 32           |
| Total expenditures.....              | <u>\$97,598 32</u> |

### PIPE SYSTEM.

Water pipes have been laid during the year as follows :

|             |                     |
|-------------|---------------------|
| 4 inch..... | 17,863 feet         |
| 6 " .....   | 75,564 "            |
| 8 " .....   | 23,724 "            |
| 12 " .....  | 9,644 "             |
| 16 " .....  | 15,686 "            |
| 24 " .....  | 10,665 "            |
| Total.....  | <u>153,146 feet</u> |



Equal to 29.05 miles. Small pipe taken up or abandoned, 7.2 miles ; net pipe added to the system during the year, 21.78 miles, making the total length of pipe laid in the city at the close of the year, 565.15 miles.

|   |       |
|---|-------|
| Fire hydrants put in during the year.....                               | 373   |
| Hydrants taken out and replaced by others of<br>different sizes.....    | 46    |
| Net number of hydrants added to the system..                            | 327   |
| Total number of fire hydrants now in use.....                           | 4,943 |
| Stop valves put in during the year.....                                 | 202   |
| Stop valves taken out and replaced by others<br>of different sizes..... | 28    |
| Net number of stop valves added to the system.                          | 174   |
| Total number now in use.....  | 4,196 |

### WATER METERS AND ENGINES.

|  |       |
|--|-------|
| Number of meters put in during the year.....                 | 285   |
| Number of meters removed during the year...                  | 73    |
| Net increase.....  | 212   |
| Total number of meters now in use.....                       | 2,897 |
| Number of elevators and other water engines<br>supplied..... | 32    |
| Total number of water engines now in use.....                | 477   |

The revenue derived from the water measured by these meters and engines for the past year amounts to \$455,862.29, an increase of \$47,796.40 over the amount collected for the same last year.

## WATER WORKS RECEIPTS AND EXPEN- DITURES FOR THE YEAR 1885.

### RECEIPTS.

|   |                       |
|---|-----------------------|
| Water rates collected (including delinquents).....        | \$1,339,038 18        |
| Water service cocks (permits and plumbers' licenses)..... | 25,475 92             |
| Water meters, labor, etc., for private parties.....       | 40,118 62             |
| Water pipe and private work at shop.....                  | 4,637 30              |
| Advances to lay water pipe.....                           | 10,846 25             |
| Miscellaneous.....  | 1,715 98              |
| Total.....  | <u>\$1,421,832 25</u> |

### EXPENDITURES.

|  |                  |
|--|------------------|
| For salaries and other expenses, water collection office.....    | \$109,264 52     |
| For other salaries and office expenses paid from water fund..... | 6,762 18         |
| For service cocks.....   | 30,275 85        |
| For meters, fittings and private work.....                       | 39,207 77        |
| For interest on water loan bonds....                             | 264,954 55       |
| For water pipe, lead and labor, etc..                            | 286,882 55       |
| For water works repairs.....                                     | 97,004 52        |
| For North Pumping Works.....                                     | 106,063 60       |
| For North Pumping Works extension.....                           | 61 59            |
| For West Pumping Works.....                                      | <u>95,817 97</u> |
| Carried forward .....  | \$1,036,295 10   |

|   |                       |
|---|-----------------------|
| Brought forward.....                              | \$1,036,295 10        |
| For West Pumping Works extension.....             | 33,550 28             |
| For lake tunnel crib.....                         | 4,802 59              |
| For Water Works shops and stables                 | 4,942 50              |
| For advances for laying water pipe, refunded..... | 9,716 43              |
| For water rates refunded.....                     | 264 64                |
| For miscellaneous .....                           | 1,507 75              |
| Total.....  | \$1,091,079 29        |
| Receipts over expenditures.....                   | 330,752 96            |
| Total.....  | <u>\$1,421,832 25</u> |

Total cost of the Water Works of the city to Dec. 31st, 1885, is as follows :

Cost up to May 6th, 1861, when the works were transferred from the Board of Water Commissioners to the Board of Public Works.. \$1,020,160 21

## EXPENDITURES SINCE 1861.

|                                       |                        |
|---------------------------------------|------------------------|
| Cost of water pipes laid.....         | \$6,188,602 40         |
| Cost of North Pumping Works.....      | 718,811 03             |
| Cost of West Pumping Works.....       | 894,565 75             |
| Cost of first lake water tunnel.....  | 464,866 05             |
| Cost of second lake water tunnel...   | 415,709 36             |
| Cost of land water tunnel.....        | 542,912 63             |
| Cost of lake crib for water tunnels.. | 70,253 31              |
| Cost of lake shore aqueduct.....      | 42,871 17              |
| Carried forward .....                 | <u>\$10,358,751 91</u> |



|                                    |                     |           |
|------------------------------------|---------------------|-----------|
| Brought forward.....               | \$10,358,751        | 91        |
| Cost of Water Workshops.....       | 25,551              | 73        |
| Cost of Water Works stock.....     | 29,318              | 00        |
| Cost of water reservoir fence..... | 1,702               | 87        |
| Cost of addition to stable.....    | 1,019               | 48        |
| Total.....                         | <u>\$10,416,343</u> | <u>99</u> |

|  |                     |           |
|--|---------------------|-----------|
| Total revenue from water rents to<br>Dec. 31st, 1885.....  | \$16,868,845        | 15        |
| Total operating expenses and main-<br>tenance to Dec. 31st, 1885, in-<br>cluding interest (\$5,667,302 08)<br>on bonded debt and bonds can-<br>celled..... | <u>\$12,563,386</u> | <u>70</u> |

|   |                  |           |
|---|------------------|-----------|
| Total surplus revenue over total ex-<br>penditures..... | <u>4,305,458</u> | <u>45</u> |
|---|------------------|-----------|

|  |              |    |
|--|--------------|----|
| The total cost of the entire Water<br>Works to Dec. 31st, 1885, is.... | \$10,416,343 | 99 |
|--|--------------|----|

## Paid for as follows :

|   |                     |           |
|---|---------------------|-----------|
| From general taxes.                             | \$2,713,878         | 53        |
| From water loan<br>bonds, 6 per cent..          | 133,000             | 00        |
| From water loan<br>bonds, 7 per cent.           | 3,490,000           | 00        |
| From water loan<br>bonds, 3.65 per<br>cent..... | 333,000             | 00        |
| From water loan<br>bonds cancelled...           | 858,000             | 00        |
| From surplus reve-<br>nue.....                  | <u>2,888,465</u>    | <u>46</u> |
|   | <u>\$10,416,343</u> | <u>99</u> |



|  |                |             |                |                       |
|--|----------------|-------------|----------------|-----------------------|
| Total surplus revenue over expenditures.....   |                |             |                | \$ 4,305,458 45       |
| Accounted for as follows :   |                |             |                |                       |
| Cash balance in Treasury Dec. 31st, 1885 .....   | \$1,128,570 90 |             |                |                       |
| Paid toward Water Works construction.....  | 2,888,465 46   |             |                |                       |
| Suspended accounts (D. A. Gage, Treas., and Duncan Sherman & Co., N. Y.)               | 180,292 72     |             |                |                       |
| American Exchange Nat. Bank, N. Y....  | 122,813 55     |             |                |                       |
| F. C. Meyer, book-keeper (discharged men's fund).....                                  | 300 00         |             |                |                       |
| J. W. Lyons, cashier (petty cash).....   | 691 88         |             |                |                       |
| Meter Dept. stock on hand.....   | 8,381 25       |             |                |                       |
| Tapping Dept. stock on hand.....   | 4,679 15       |             |                |                       |
| Shop and stable stock on hand.....   | 4,062 78       |             |                |                       |
|  |                |             |                | <u>\$4,338,257 69</u> |
| Less amount due depositors for h'd't wrench's  | 540 00         |             |                |                       |
| Less am'nt advanced by private parties to lay water pipes in non-paying districts..... | \$32,259 24    | \$32,799 24 | \$4,305,458 45 |                       |

## BONDED DEBT OF WATER WORKS.

Water loan bonds outstanding December 31st, 1885, bearing 7 per cent. interest, mature as follows :

|                   |                     |
|-------------------|---------------------|
| July 1, 1888..... | \$150,000 00        |
| " 1, 1889.....    | 225,000 00          |
| " 1, 1890.....    | 268,000 00          |
| " 1, 1892.....    | 821,000 00          |
| " 1, 1894.....    | 541,000 00          |
| " 1, 1895.....    | <u>1,485,000 00</u> |
|                   | \$3,490,000 00      |

Bearing 6 per cent. mature as follows :

|                   |                  |
|-------------------|------------------|
| July 1, 1897..... | \$50,000 00      |
| " " 1898.....     | <u>82,000 00</u> |
|                   | \$132,000 00     |

Bearing 3 65-100 per cent. mature as follows :

|                              |                              |
|------------------------------|------------------------------|
| July 1, 1902.....            | <u>333,000 00</u>            |
| Grand total outstanding..... | <u><u>\$3,955,000 00</u></u> |

Net cash balance to credit of water

fund December 31st, 1885.....\$1,128,570 90

The total interest paid on water loan

to January 1st, 1886, is.....\$5,667,302 08

The following table shows the amount of water furnished and the revenue per million gallons received annually by the City from the year 1858 to 1885 inclusive :

| YEAR.                 | Million Gallons<br>Furnished. | Revenue.     | Revenue<br>per Million<br>Gallons. |
|-----------------------|-------------------------------|--------------|------------------------------------|
| 1858.....             | 1,092                         | \$102,178 85 | \$ 93 57                           |
| 1859.....             | 1,415                         | 122,753 50   | 86 70                              |
| 1860.....             | 1,717                         | 131,162 73   | 76 39                              |
| 1861.....             | 1,766                         | 131,035 10   | 74 15                              |
| 1862 (15 months)..... | 2,705                         | 188,448 25   | 85 00                              |
| 1863.....             | 2,336                         | 192,246 39   | 82 29                              |
| 1864.....             | 2,523                         | 224,902 57   | 89 14                              |
| 1865.....             | 2,778                         | 253,114 49   | 91 11                              |
| 1866.....             | 3,169                         | 302,017 59   | 95 30                              |
| 1867.....             | 4,232                         | 338,929 28   | 80 08                              |
| 1868.....             | 5,375                         | 420,686 94   | 78 26                              |
| 1869.....             | 6,801                         | 476,968 24   | 70 13                              |
| 1870.....             | 7,945                         | 539,180 19   | 67 86                              |
| 1871.....             | 8,423                         | 445,834 64   | 52 93                              |
| 1872.....             | 10,051                        | 544,465 90   | 54 17                              |
| 1873.....             | 11,723                        | 708,804 32   | 60 46                              |
| 1874.....             | 13,903                        | 705,926 64   | 50 77                              |
| 1875 (9 months).....  | 10,957                        | 635,996 54   | 58 04                              |
| 1876.....             | 15,346                        | 771,940 38   | 50 30                              |
| 1877.....             | 19,047                        | 908,509 64   | 47 70                              |
| 1878.....             | 19,564                        | 944,190 97   | 48 31                              |
| 1879.....             | 20,557                        | 922,001 26   | 44 85                              |
| 1880.....             | 21,002                        | 865,618 35   | 41 21                              |
| 1881.....             | 23,331                        | 936,922 07   | 40 16                              |
| 1882.....             | 24,150                        | 1,049,576 90 | 43 46                              |
| 1883.....             | 26,742                        | 1,142,868 54 | 42 73                              |
| 1884.....             | 29,286                        | 1,204,338 74 | 41 12                              |
| 1885.....             | 33,451                        | 1,339,038 00 | 40 03                              |

### THE WATER SUPPLY

During the year has not been interrupted by any accident or otherwise and although the quantity has been ample there have been periods when the consumption was so great that the head of water proved insufficient to send it to the upper stories of buildings in some distant portions of the city. This has occurred during the extreme hot and cold months.



There were thirty-four days during the year when the consumption of water was over one hundred million gallons per day. Ten days in January the quantity pumped averaged over  $103\frac{1}{2}$  million gallons, the greatest quantity for one day being nearly  $105\frac{3}{4}$  millions. The mean temperature during the time ranged from  $5\frac{1}{2}$  degrees below to 27 degrees above zero. During 16 days in February the daily quantity pumped averaged  $106\frac{7}{8}$  millions, the greatest quantity for one day being over 111 million gallons. The mean temperature during these 16 days ranged from nearly 11 degrees below to 35 degrees above zero. During five days in July the average quantity of water pumped daily, averaged a trifle over 103 million gallons, with a mean temperature ranging from 76 to 85 degrees.

We may naturally look for the greatest consumption of water during the warmest days of summer, when large quantities are used for street sprinkling, lawn sprinkling and more copiously for all legitimate purposes. But the fact is as shown that during the coldest days of winter when these demands for water do not exist, the greatest quantity is used, clearly demonstrating an enormous and unnecessary waste. It is found, too, that the ratio of the waste in cold weather is greatest between the hours of 11 P. M. and 5 A. M., a period when the consumption of water should be the least.

The following amounts of rebate of water rates to charitable and educational institutions and private houses, have been made during the year by order of the City Council :

|                                  |          |    |                    |
|----------------------------------|----------|----|--------------------|
| Churches.....                    | \$7,936  | 38 |                    |
| Hospitals, Homes, etc.....       | 7,439    | 28 |                    |
| Parochial schools.....           | 6,060    | 84 |                    |
| Colleges and seminaries.....     | 1,082    | 15 |                    |
| Sisters of Charity schools.....  | 1,696    | 84 |                    |
| Woman's Exchange.....            | 63       | 25 |                    |
| Convents.....                    | 999      | 33 |                    |
| Private property of individuals. | 273      | 38 |                    |
|                                  |          |    | \$25,551 45        |
| School buildings.....            | \$35,668 | 48 |                    |
| Fire Department buildings...     | 10,071   | 50 |                    |
| Police Department stations,...   | 11,415   | 00 |                    |
| City hall.....                   | 1,814    | 66 |                    |
| “ Hospital.....                  | 133      | 00 |                    |
| Pipe yard.....                   | 13       | 00 |                    |
| Sewerage office at pipe yard..   | 19       | 00 |                    |
| Old morgue.....                  | 21       | 00 |                    |
| City pound.....                  | 19       | 50 | 59,175 14          |
| Total.....                       |          |    | <u>\$84,726 59</u> |

Representing at meter rate of 10 cents per thousand gallons, 847,265,900 gallons of water, about  $2\frac{1}{3}$  millions per day.

In regard to the quality of water furnished to the citizens of Chicago, I submit the following report

upon the subject, by the well-known chemist, Prof. J. H. Long :

CHICAGO, August 13, 1885.

DEWITT C. CREGIER, ESQ.,

*Commissioner of Public Works,*

CHICAGO,

DEAR SIR : I herewith submit my report of the chemical analysis of the seven samples of water collected on July 30th, last, by your orders, at different points in the lake, and also of three samples taken from a hydrant in the Chicago Medical College, on the evenings of August 4th and 12th and morning of August 7th. The samples from the lake were given to me in glass bottles, marked A, B, C, D, E, F and G. Since completing my examination, and making a preliminary report to you, the localities from which the several samples were taken were made known to me and are given in the table. I have taken as my criteria the amounts of "free" and "albuminoid" ammonia obtained from the water, and the amount of oxygen consumed by it in oxidation.

These are the data determined and here given, and the methods I employ are those followed by a majority of chemists in this country and England.



| No. AND LOCATION OF SAMPLES.                          | FREE AMMONIA<br>IN 1,000,000<br>PARTS.   |  |      |
|---|--|--|------|
|   | ALBUMINOID<br>AMMONIA<br>1,000,000 PARTS | OXYGEN CON-<br>SUMED BY<br>1,000,000 PARTS |      |
| A—at crib, 18 feet below surface. ....                | .005                                     | .160                                       | 5.52 |
| B—150 yards south of crib, from bottom. ....          | .003                                     | .136                                       | 3.20 |
| C—150 yards south of crib, 6 feet below surface. .... | .003                                     | .130                                       | 3.36 |
| D—Fullerton Avenue crib, bottom. ....                 | .003                                     | .132                                       | 3.36 |
| E—Fullerton Avenue crib, surface. ....                | .003                                     | .114                                       | 2.24 |
| F—near Grosse Point, 30 feet below surface. ....      | .004                                     | .184                                       | 2.80 |
| G—near Grosse Point, at surface. ....                 | .024                                     | .096                                       | 1.04 |
| Hydrant, August 4th, } Cor. 26th and Prairie Ave. ... | .008                                     | .110                                       | 1.04 |
| Hydrant, August 7th, }                                | .003                                     | .094                                       | .96  |
| Hydrant, August 12th, }                               | .004                                     | .074                                       | .80  |
| Average (omitting "free" ammonia of G). ....          | .004                                     | .118                                       | 2.43 |

These figures deserve very careful consideration, and the point of greatest importance is this, that the free ammonia is in every case, but one, remarkably low. In G I have reason to suspect an accidental contamination of the water after collection, which would explain the larger amount found.

These minute traces of "free" ammonia, almost too small for satisfactory determination, *show beyond a doubt that the waters examined are free from sewage contamination*, for one of the most characteristic features of sewage is to add to water *ammonia* coming from the decomposition of certain constituents of urine.

Amounts of ammonia as small as I have found cut no figure whatever; they would have to be increased several times before becoming suspicious. When I say the water is free from sewage contamination I do not mean that it is free from organic matter. Indeed,

this is not the case, as the figures of the second column very plainly show. The relatively large amounts of "albuminoid" ammonia indicate the presence of an organic constituent in the water, and when we consider, in connection with this, the minute traces of "free" ammonia found, it is evident the constituent is vegetable, not animal, in its nature. This opinion is further strengthened by the fact that the water, whether taken from the lake or from the hydrant, shows only very small traces of nitrites.

At various times in the past three years I have determined the "free" and "albuminoid" ammonia and consumption of oxygen in the water as taken from the hydrant. The results obtained in these tests have been reported elsewhere. In general they showed, as above, a large excess of "albuminoid" ammonia. Many of my experiments were carried out during and after the freshets of March, 1883, which may account for the large quantities of "free" ammonia found and reported. Some further idea of the nature of the water and amount of organic matter in it may be obtained from the following table, embracing the results of a complete analysis made by Miss M. R. LeMoyne, a student in my laboratory, and myself. On June 6th of this year I collected about 35 gallons of water from the lake at a point four miles east of the crib, and this we submitted to a most careful examination. The quantities given are in parts per million:



|                          |        |
|--------------------------|--------|
| Calcium sulphate.....    | 5.30   |
| Calcium carbonate.....   | 76.50  |
| Magnesium carbonate..... | 37.73  |
| Ferrous carbonate.....   | .49    |
| Potassium sulphate.....  | 4.85   |
| Sodium chloride.....     | 3.86   |
| Silica.....              | 5.25   |
| Alumina.....             | traces |
| Phosphoric acid.....     | traces |

---

 133.98

Total solids by evaporation, at 180° C., 136.00

Besides this, small traces of nitrates and nitrites exist, but other inorganic substances do not seem to be present, even when looked for in large volumes of water from the hydrant.

Taking into consideration the large quantity of water employed in the tests, and the fact that in waters not containing organic matter the sum of the solids found by direct analysis is usually slightly greater than the residue dried at 180° C., it will be seen that there is a difference of 2 or three parts in a million, which probably represents, approximately, the non-volatile organic constituents. Results very similar to this we find on analysis of water taken from the hydrant and from a point in the lake a mile and a half east of Lake View.

Among the earlier reports to the Chicago Board of Public Works I find a number of analyses of the water,

made by two chemists at the time. The organic matter reported as found is absurdly high—probably ten times what it actually amounts to; and I call attention to these analyses here because their results have been frequently quoted; in fact, within a year I have seen them in one of our leading papers.

It may be of interest in this connection to note the results obtained in the examination of the water supply of other cities. In many places regular tests are made from week to week, or from day to day in some instances, and the results, which often show considerable variations, published. The table below contains the amount of "free" and "albuminoid" ammonia found and oxygen consumption, expressed in parts per million. Most of the data for ammonia waters were obtained from reports by Prof. Leeds to the Newark Aqueduct Board:

|                                 | FREE<br>AMMONIA.                | ALBUMINOID<br>AMMONIA. | OXYGEN<br>CONSUMED. | REMARKS.   |
|---------------------------------|---------------------------------|------------------------|---------------------|--|
| New York (Croton).....          | .070                            | .245                   |                     | Prof. Chandler.  |
| " " ".....                      | .027                            | .269                   | 8.05                | June 23d, 1881.  |
| Brooklyn (Ridgewood).....       | .008                            | .082                   | 4.11                | June 23d, 1881.  |
| Boston (Cochituate).....        | .130                            | .610                   | 18.00               | June 23d, 1881.  |
| Philadelphia.....               | .010                            | .180                   | 4.63                | June 24th, 1881.   |
| Baltimore .....                 | .049                            | .201                   | 5.65                | June 25th, 1881.   |
| Washington.....                 | .060                            | .269                   | 6.00                | July 5th, 1881.  |
| Oswego.....                     | .034                            | .260                   | 6.34                | July 9th, 1881.  |
| Cincinnati.....                 | .115                            | .240                   | 8.56                | July 15th, 1881.   |
| Rochester .....                 | .015                            | .223                   | 7.88                | July 23d, 1881.  |
| Columbus.....                   | .010                            | .060                   | 2.00                | April, 1885.   |
| Mean... ..                      | .048                            | .240                   | 7.12                |  |
| Chicago Mean, as above.....     | .004                            | .118                   | 2.43                |  |
| Glasgow.....                    | .00                             | .08                    |                     | Oct. 3d, 1867.   |
| Edinburgh.....                  | .00                             | .07                    |                     | Sept. 18th, 1867.  |
| Manchester.....                 | .01                             | .06                    |                     | Aug. 19th, 1867.   |
| London (before filtering) ..... | .025                            | .245                   |                     | Much of the London<br>water is filtered by<br>large co's, and so sup-<br>plied to consumers. |
| London (after filtering).....   | variable<br>but fairly<br>good. |                        |                     |  |

*From the above it will be seen that the waters submitted to me for examination are very much purer than those furnished to any large American city, excepting Brooklyn (and probably St. Louis, not in the list). The water supplies of these places show, in some cases, a smaller percentage of mineral ingredients, but as regards organic constituents Lake Michigan stands very high in the list, as is seen by comparing the individual tests, or the averages in the tables above.*

The mineral matter and sediment, frequently observed in our water, I consider comparatively harmless. In fact, I believe the latter plays a very important part in the destruction of such organic contamination



as must, in small amounts, necessarily find their way into the lake. This and the agitation of pumping probably explain the fact that the hydrant water shows smaller traces of organic impurity than does that from the lake. *Taking all things into consideration I must say, in conclusion, that my investigations indicate a remarkable freedom from sewage contamination in our water, and that the traces of organic matter found must come from some other source.*

Very respectfully submitted,

J. H. LONG.

In previous reports I have called attention to the fact that the capacity of the present lake tunnels to supply the demand would soon be reached.

The combined practical capacity of the tunnels is about 150 millions per day, while the combined pumping capacity is equal to 130 millions per day.

In October last a contract was made with the Holly Manufacturing Company for a pair of the Gaskill compound engines, having a capacity of 24 million gallons per day. This additional machinery will be erected during the ensuing season, and will, with the present engines, constitute a capacity fully equal to that of the tunnels, hence the limit of supply under present conditions will then be reached.

During the past four years the extension of the pipe system averaged over 23 miles per year. The average daily increased consumption of water during the same period was 9 57-100 per cent. At the end of the next four years this average increase will place the consumption at nearly 127 millions per day, but the ratio of increase is likely to be much greater. The daily average increase of one year over the previous year, has been as high as 29 6-10 per cent. It has averaged for 27 years 13 8-10 per cent. The present year over 1884 there was a daily increase of over 14½ per cent. These figures induce me to call the attention of your Honorable Body to the pressing necessity for action, upon the recommendations made in my last annual report. Pages 25 and 26.

Ever since the establishment of the lake crib there has been maintained what is known as the shore inlet. This conduit is designed to procure water from the shore in case of an emergency, such as stoppage of the flow of water at the crib in winter. For this purpose it is an important adjunct, and must be kept in good order. The present structure is entirely of wood, and portions of it are fast going to decay. Three years since plans were made for a short sub-tunnel of masonry to take the place of the present wood conduit. It is intended during the present year to carry out the plans suggested.

There is another feature in connection with this



subject that demands careful consideration and timely action. Since the completion of the protection to the Lake Shore Drive several years ago by the Park Commissioners, the shore from Oak street south to Pearson street has gradually yielded to the ravages of the heavy seas of the lake, until now little or no land is left east of Pine street, from Oak to Chestnut streets, several acres of what was formerly dry land occupied by dwellings having been washed away, and Pine street is frequently made impassable by washouts, and nearly all the streets' ends east of Pine street have disappeared. In 1855 the city built a pile protection in the lake between Pearson Street and Chicago Avenue, the site of the Pumping Works. The pile work formed an inlet basin for the Pumping Works. Upon the completion of the lake tunnel this basin was abandoned. The piles above water have of course fallen into decay; although the portion below water is probably in good condition. It is believed that were it not for this pile-work and that subsequently put in around the end of Pearson street the lake would soon wash away the eastern portion of the Water Works premises, with the shops and other buildings there located. Although considerable time and money are annually expended to strengthen the old pile work it is now beyond further repair, and cannot therefore be relied upon as a means of protection from the action of the lake. There should be a suitable and substantial

breakwater extending from Oak Street to Chicago Avenue, a distance of about 1,500 feet, located far enough east to protect the city property and that of private individuals ; the cost of such protection should be borne by those interested. Whether this much needed work can be secured by legislation, under the system of special assessment or otherwise, is a question for your Honorable Body to determine, but that some measure should be inaugurated to guard against the further destruction of public and private property will be manifest to any one witnessing the action of the lake in this locality during a storm.

The possibility of a contingency arising rendering it necessary to take the water from the shore at any time, calls for the strict enforcement of the city ordinance prohibiting the deposit of any refuse matter on the lake shore, within four blocks north and south of the pumping works. This is referred to here because it has become the custom of late years to grossly violate the ordinance by dumping debris, street sweepings, garbage and other objectionable matter on the shore near the water, and within the limits specified. In case of a storm, the stuff is carried into the lake, rendering the water unfit for use should the shore inlet be called into requisition.

Much has been said and written in regard to the deleterious effects of the river on the water supply. But, with the South Branch Pumping Works in oper-



ation delivering the river water into the canal, and the Fullerton Avenue Pumping Works forcing the water from the lake into the North Branch, the current throughout the entire river flows southerly into the canal. Consequently the river water does not enter the lake except when the volume of water from the Desplaines river and other sources flowing into the West Branch is in excess of the capacity of the South Branch Works. In such cases the only outlet is the lake, but even so it is doubtful if the water in the lake at the point whence the city is supplied is liable to be affected by the outflow of the river, as it may be, by making the lake a common "dump" for most of the foul matter dredged from the bottom of the river, the refuse from distilleries, the filth from the streets and other like material, which are carried out in scows and dumped into the lake. The U. S. authorities have designated a dumping point in the lake, about  $2\frac{1}{2}$  miles southeast of the mouth of the river, where all material is required to be carried. If this requirement is fairly observed the water at the crib is not likely to be affected, but it frequently happens that in case of rough weather, with frail and unmanageable scows in a seaway, and at night when detection is difficult, boat loads of refuse are dumped a long way inside the designated point, and this, too, when at large expense the Pumping Works are kept in operation to prevent a far less quantity of objectionable matter entering the lake via the river. Little or



nothing has been said or written in opposition to a custom so fraught with danger to the water supply. Although this Department has kept watch by day and by night, and caused the arrest of several parties engaged in this nefarious practice, yet violations of the laws and ordinances in this regard are liable to occur at any time under the conditions mentioned. It is therefore a matter of sufficiently grave importance to engage the attention of the proper authorities, and to warrant the severe punishment of those that are guilty of the offense.

The two boilers in the north wing at the North Pumping Works should be replaced with new ones at an early day; one of them has been in use nearly 19 years, the other a few years less. These boilers are of the so-called marine type, and designed for low pressure steam. I would recommend that all additional boilers for the Works be of the cylindrical tubular type, and designed for a higher pressure of steam.

The two new engines completed in July, 1884, at the West Works were subjected to a capacity and duty test in April last by a Board of experts. These engines are, with the exception of the main pump valves, exact duplicates of the pair erected in 1876. The test trial demonstrated that all the requirements of the contract were fully complied with. The engines were therefore accepted by the City, and have operated in a satisfactory manner up to this time. The following is the report of the experts:

CHICAGO, April 22, 1885.

HON. DEWITT C. CREGIER,

*Commissioner of Public Works.*

SIR: In compliance with your appointment and instructions to test the two engines lately erected at the West Side Pumping Works in this City we submit the following report:

The engines under the contract of January 31, 1882, were required to have ample power and capacity to raise fifteen millions (15,000,000) U. S. gallons of water one hundred and fifty (150) feet in twenty-four (24) hours, when the pump pistons were running at a speed not exceeding two hundred (200) feet per minute; the height to be measured from the surface of water in the pump well, and the volume to be determined by a wier, or equally reliable method.

The duty required to be developed not to be less than ninety million (90,000,000) pounds of water raised one foot in height for each one hundred (100) pounds of coal consumed in the generation of the steam used to operate the engines and machinery in connection therewith during the time devoted to the test.

The fuel to be used for the test trial to be of standard quality of eastern bituminous coal, and the



steam pressure in the boilers not to exceed seventy (70) pounds per square inch.

The duty to be performed without any deduction from the coal for clinkers or ashes, or of any friction of water in pump or connections, for use of steam for feed pump, or for any purpose consequent upon the operation of the machinery.

The contractor was informed by you that in consequence of the daily demand of the City for water, it would be impracticable for the test to be made by delivering the water into the stand pipe or tower, and as a consequence it must be delivered over a wier, under a throttling of the delivery pipe, in order to obtain a pressure indicated by an attached gauge equivalent to that due to the height of one hundred and fifty (150) feet, as required by the contract.

The contractor held this method to be disadvantageous to his interest, but in view of the alleged necessity of the case he acceded to it.

The several steam and water gauges in connection with the engines, boilers and wier were officially verified by a standard gauge, and the scale for the weighing of the coal was tested and found to be correct.

The following elements in connection with the result of the test were ascertained, viz.:

Width of wier..... 8.014 feet  
 Height of water gauge above datum.....31.54 "

Coal, Bituminous (Piedmont).

The test of engine No. 51 was commenced at 10 A. M. on the 17th inst. At 10 A. M. on the 19th inst. the test was concluded, having been in continuous operation for the period of 48 hours.

Upon a summary of the observations as recorded and signed by the observers and ourselves, the following results of operation as averaged for the entire period are deduced, viz.:

|   |                  |
|---|------------------|
| Height of water upon wier,<br>corrected for the velocity<br>of approach (.0033)....               | 1.0455           |
| Pressure on water gauge.....  | 54.0076 lbs.     |
| x2.306.....   | 124.5415         |
| Elevation of gauge above sur-<br>face of water in well, as<br>determined by a float<br>gauge..... | 30.6432 155.1847 |
| Pressure of steam.....  | 70.63 lbs.       |
| Vacuum.....   | 13.4 "           |
| Revolutions.....  | 34,692           |
| Volume of feed water per hour<br>at temperature of 178.1°.  | 11,850 "         |
| Temperature of water.....   | 38°              |
| Coal consumed.....  | 47,275 "         |

## COMPUTATION OF CAPACITY AND DUTY CAPACITY.

Volume of water discharged over wier for the full period of 48 hours:  $3.33 (8.0104 - .2 \times 1.0455) 1.0455 \frac{1}{2} \times 60 \times 60 \times 48 \times 7.4805 = 35,897.423.4$  gallons, = 17,948,711.7 for 24 hours.

### DUTY.

$3.33 (8.0104 - .2 \times 1.0455) 1.0455 \frac{1}{2} = 27.770834$  cubic feet, and  $\frac{27.770834 \times 60 \times 60 \times 48 \times 62.5 \times 155.1847}{47275} = 98,453,246$  lbs.

The test of engine No. 50 was commenced at 3 P. M. of the 19th inst. and concluded at 3 P. M. of the 20th inst. for a continuous period of 24 hours, and a summary of the observations as recorded and signed by the observers and ourselves, the following results of operation as averaged for the period, are deduced, viz.:

|   |                          |
|---|--------------------------|
| Height of water upon wier<br>corrected for the velocity<br>of approach (.0033)..... | 1.051 feet               |
| Pressure on water gauge.....  | 54.51 lbs.               |
| $\times 2.306$ .....  | 125.7 feet.              |
| Elevation of gauge above sur-<br>face of water in well.....                         | $30.4916 = 156.1916$ ft. |
| Pressure of steam.....  | 70.4 lbs                 |
| Vacuum.....   | 13.26 "                  |
| Revolutions.....  | 17,527                   |
| Volume of feed water per hour<br>at temperature of $181^{\circ}$ ..                 | 12,025 "                 |
| Temperature of water.....   | $38^{\circ}$             |
| Coal consumed.....  | 22,200 "                 |



COMPUTATION OF CAPACITY AND DUTY  
CAPACITY.

Volume of water discharged over wier in 24 hours:  
 $3.33 (8.0104 - .2 \times 1.051) 1.051 \frac{3}{4} \times 60 \times 60 \times 24 \times 7.4805 =$   
 18,088,198 gallons.

## DUTY.

$3.33 (8.0104 - .2 \times 1.051) 1.051 \frac{3}{4} = 27.987$  cubic feet  
 and  $\frac{27.987 \times 62.5 \times 60 \times 60 \times 24 \times 156.9116}{2200} = 106,818,492$  lbs. raised one  
 foot in height by one hundred pounds of coal.

We submit therefore that the requirements of the contract as to capacity and duty have been filled.

The preceding computations and results evidence that the engines have operated, both in capacity and duty, in excess of that required by the contract, and in this connection we deem it proper to add that the test in both cases was made without any preparation therefor except the cleaning of the furnace grates and the blowing through of the boiler tubes, the engines being simply diverted from their daily and continuous operation of several months.

The cause of the increased duty of engine No. 50 we attribute to the use of a better condition of the coal and firing.

The character and endurance of the engines and boilers as dependent upon their design and construction, is illustrated in a very satisfactory manner

by their reliable and uniform operation added to an economic consumption of fuel, all of which is evidenced by their having been frequently submitted to the resistance and stress of a head of water much exceeding that required by the contract.

We are, respectfully,

CHAS. H. HASWELL,  
D. J. WHITEMORE,  
EDWARD HEMBERLE,  
W. W. BAILEY.

### SEWERS.

The system of sewers has been extended during the year as follows :

|                                       |                      |
|---------------------------------------|----------------------|
| Constructed in the West Division..... | 15.059 miles.        |
| Constructed in the South Division.... | 6.354 "              |
| Constructed in the North Division.... | 1.058 "              |
| Total.....                            | <u>22.471 miles.</u> |

|  |     |
|--|-----|
| Number of catch-basins built.....            | 796 |
| Number of sewer man-hole chambers built..... | 854 |

The cost of constructing sewers and catch-basins during the year is as follows :

|                     |                     |
|---------------------|---------------------|
| West Division.....  | \$136,141 09        |
| South Division..... | 52,647 25           |
| North Division..... | <u>14,055 99</u>    |
| Total.....          | <u>\$202,844 33</u> |

The total number of miles of sewers in the city December 31st, 1885, is.....436,345  
 Total number of catch-basins is..... 13,744  
 Total number of man-hole chambers is..... 15,582

### MAINTENANCE.

The total cost of cleaning and repairs, and cost per mile, together with the number of catch-basins and man-hole chambers, and miles of sewers in the three Divisions, respectively, is as follows:

| DIVISION.  | Miles of Sewers. | No. of Catch-basins. | No. of Man-hole Chambers. |
|------------|------------------|----------------------|---------------------------|
| West.....  | 239.415          | 7,456                | 8,489                     |
| South..... | 119.670          | 3,832                | 4,309                     |
| North..... | 77.260           | 2,456                | 2,784                     |
| Total..... | 436.345          | 13,744               | 15,582                    |

There was expended for repairs during the year, \$8,886.95 being an average cost of \$20.37 per mile.

For cleaning there was expended \$46,532.18, making an average cost of \$106.64 per mile. The total cost of both repairs and cleaning was \$55,419.15, leaving the total average cost \$124.71 per mile.

Of the 436.345 miles of sewers constructed, 228.896 miles are of brick, and 207.449 miles are of vitrified pipe.



## TOTAL COST OF SEWERS, ETC.

| DIVISIONS.  | Miles.  | Cost.          | Average cost per mile. |
|-------------|---------|----------------|------------------------|
| West.....   | 239.415 | \$3,596,344 57 | \$15,021 38            |
| South.....  | 119.670 | 1,777,436 37   | 14,852 81              |
| North.....  | 77.260  | 1,207,999 29   | 15,635 51              |
| Totals..... | 436.345 | \$6,581,780 23 | \$15,083 89            |

## BONDED SEWER DEBT.

Bonds outstanding December 31st, 1885, bearing 7 per cent. interest, mature as follows :

|                     |              |
|---------------------|--------------|
| July 1st, 1888..... | \$343,000 00 |
| “ “ 1889.....       | 44,000 00    |
| “ “ 1892.....       | 490,000 00   |
| “ “ 1894.....       | 785,000 00   |
| “ “ 1895.....       | 13,000 00    |

Total.....\$ 1,675,000 00

|  |            |
|--|------------|
| July 1st, 1890, bearing 4½ per cent.<br>interest.....  | 489,500 00 |
| July 1st, 1904, bearing 4 per cent. in-<br>terest..... | 458,000 00 |

Grand total outstanding.....\$2,622,500 00

The total interest paid on sewerage  
bonds to January 1st, 1886, is.....\$4,264,273 50  
The total amount paid as interest on  
river improvement bonds to January  
1st, 1886, is.....\$3,214,500 00

The whole amount paid as interest on  
water, sewerage and river bonds  
combined is.....\$13,146,075 58

The western limits of the city extend only to the center of Western Avenue, north of North Avenue. The territory west of this section lies in the town of Jefferson. In extending the 9 foot sewer from Armitage Avenue south it became necessary to construct the sewer on the eastern half of Western Avenue, but under an agreement entered into between\*the city and the village of Jefferson the sewer was built in the center of Western Avenue. The conditions of the agreement provide that the authorities of the village shall have the right to connect lateral sewers with the said 9-foot sewer, for the purpose of draining the south 480 acres of Section 36. For this, right to the city to occupy the center of Western Avenue is granted in perpetuity, and in addition thereto the village is to pay the city \$10,000.00 in ten annual installments of \$1,000.00 with interest at 6 per cent. per annum on deferred payments. Also to build all needed catch-basins on the west line of Western Avenue, between Armitage and North Avenues, and share 20 per cent. of the annual cost of the expense of cleaning and maintenance of the entire line of sewer from North Avenue via Western and Armitage Avenues to its terminus at the North Branch of the river. The agreement further provides that the city shall have exclusive jurisdiction and con-



trol over the sewer and that all connections and the character thereof shall be subject to the approval of the proper city authority.

The growth of the city west and northwest, and the sanitary needs of these localities, demand a greater extension of the sewer system than the crippled resources of the city will permit. Something over 22 miles of sewers were added during the year, which exhausted the entire appropriation for this important branch of public work. It would be entirely practicable to construct 40 or more miles of sewers during the working season if it were possible to furnish the means.

#### NORTH BRANCH RIVER PUMPING WORKS.

These Works have been in operation most of the time, and with the exception of a few days in August last the water has been drawn from the lake and forced into the North Branch of the river, keeping the stream in a satisfactory condition. The crib at the lake end of the conduit of these Works was, from some unknown cause, burned to the waters surface on the 5th of June, last. The structure was promptly rebuilt.

The forcing wheels in connection with the engines were badly broken by contact with timber passing through conduit; these have been replaced with new ones. The Works as a whole are at this date in good order.

During the past year 165,009,090 cubic feet of water have been forced from the lake into the river, and 5,126,885,795 cubic feet from the river into the lake, making a total of 5,291,894,885 cubic feet of water moved, at a cost for operating and the maintenance of the Works of \$18,500.88.

### SOUTH BRANCH RIVER PUMPING WORKS.

These Works have been in operation daily during the year, except during the short periods of freshets due to heavy rainfall, etc. At such times the operation of the Works is unnecessary, as the volume of water flows into the canal and lake unaided. The cost of operating the Works during the year is \$44,644.07.

The total cost of the works previously reported is \$251,177.22. Expended during past year for account of construction \$2,661.09, making the total cost \$253,838.31.

In April last the machinery was subjected to a test as required by the contract. The engines and boilers were found to be in every respect up to the requirements in material, workmanship and in their operation, but the centrifugal pumps failed to develop the capacity and duty guaranteed by the builders; several alterations were made in the pumps, resulting in improving their action, but not up to the requirements. The following report of the Board of Experts appointed to make the test, is submitted:



MR. DEWITT C. CREGIER,

*Commissioner of Public Works of the City of  
Chicago:*

SIR: We, the undersigned, appointed by you as a Board of Experts to test the canal engines designed for the purpose of pumping the water and sewerage combined from the South Branch of the Chicago River into the Illinois and Michigan Canal in this city, respectfully submit the following report:

Our line of duty, which we have faithfully endeavored to perform, is indicated in the following extracts taken from the contract under which said plant was constructed:

"For the construction and erection of the four sets  
"of Centrifugal Pumping Machinery, having an aggregate capacity to raise 60,000 cubic feet of water  
"per minute 8 feet high, and to perform a duty of  
"45,000,000 lbs. of water raised one foot high by the  
"consumption of each 100 lbs. of good Eastern  
"Bituminous Coal."

#### TEST TRIAL.

"The machinery will be tested for a period of not  
"less than 48 hours by experts paid and appointed by  
"the city, and entirely satisfactory to the contractors,  
"and the contractors guarantee that at such test trial  
"the machinery shall perform a duty of not less than

"45,000,000 foot lbs. by the consumption of each 100  
"lbs. of good Eastern Bituminous Coal, the steam  
"pressure at the engines not exceeding 80 lbs. per  
"square inch above the atmosphere, and the pumps  
"and engines working from 100 to 125 revolutions.

"The 'duty' to be developed by said combined  
"machinery when working under the conditions stated  
"to be not less than forty-five (45) million pounds of  
"water raised one foot high for every one hundred  
"pounds of good quality of Eastern Bituminous Coal  
"consumed. The said duty shall be performed with-  
"out any deduction from the coal consumed of  
"clinkers or ashes, or of any friction of machinery,  
"friction of water in pumps and connections therewith,  
"for use of steam for feed pumps, or any purpose due  
"to the operation of the machinery as a whole.

"At such time within a year after the machinery is  
"put in regular operation, as the Commissioner of  
"Public Works may determine, a test trial of the  
"strength, capacity and duty of the engines, boilers,  
"pumps and appendages shall be made by such experts  
"as the said Commissioner may appoint for the pur-  
"pose. One or more of the engines and pumps may  
"be tested at one time. The period of time for such  
"test shall not be less than forty-eight consecutive  
"hours."

On April 21st the Board examined the premises  
and checked all steam, water and wier gauges, and



scales for weighing fuel, and arranged that the test should commence at 3 P. M. the following day and continue without interruption for a period of 48 hours.

It had been arranged that the quantity of water pumped should be determined by wier measurement and with the stage of water in the lake and river at the time of the test. We found it impossible to elevate the water pumped to the height of 8 feet as contemplated in the contract.

Piedmont Bituminous coal had been selected by the contractors for fuel to be used, and at the appointed time fully instructed observers were in their places and the test trial commenced and continued for 48 hours, with but slight interruptions, which interruptions were caused mainly through an insufficiency of condensing water and did not affect the result. This loss of time has been fully compensated for in our calculations. During the whole period of said tests one or more of our Board was present at the Works.

All observations in engine room and at water gauges and hook gauges at wier were taken at periods of 15 minutes, as were the steam pressures in the two boiler rooms.

The record of fuel used in the two boiler rooms was made as the fuel was required. All of which



you will find tabulated in the books of records herewith. The boilers were so arranged that each battery supplied two sets of pumps by closing a stop-valve in the steam pipe. The average results of all observations thus taken are as follows, to-wit :

### BOILER ROOMS.

|  |        |      |
|--|--------|------|
| <i>South Boiler Room</i> —Average pressure |        |      |
| of steam.....                              | 81.99  | lbs. |
| Coal consumed.....                         | 69,100 | "    |
| <i>North Boiler Room</i> —Average pressure |        |      |
| of steam.....                              | 81.42  | "    |
| Coal consumed.....                         | 82,034 | "    |

### ENGINE ROOM.

|   |         |      |
|---|---------|------|
| Average steam pressure at engine.....                       | 80.5    | lbs. |
| Average vacuum.....   | 24.4    | "    |
| Total feed water used in south boiler room.....             | 774,375 | "    |
| Average temperature of feed water in south boiler room..... | 149.33° |      |

### EVAPORATION SOUTH BOILER ROOM.

Actual evaporation 11.206 lbs. per pound of coal or 12 29-100 lbs. of feed water from and at a temperature of 212° for each pound of coal.

Arrangements were not such that the feed water could be measured in north boiler room.

## REVOLUTIONS OF EACH ENGINE.

| ENGINES.          | TOTAL.    | AVERAGE PER<br>MINUTE.    |
|-------------------|-----------|---------------------------|
| Engine No. 1..... | 301,840   | 104.78                    |
| " " 2.....        | 295,929   | 102.75                    |
| " " 3.....        | 293,295   | 101.84                    |
| " " 4.....        | 300,908   | 104.48                    |
| Totals.....       | 1,191,972 | 103.46<br>For H. Engines. |

Indicator cards were taken at periods of about one hour, engines Nos. 2 and 3, during the test, and of these 20 of each engine were taken as fair types from which the tables having reference to same were made.

The heights in the fore and back bay were observed in proximity to the engine room and the difference between the average of all such observations was 6.489 feet, which is the average head attained in this test.

The height of water in fore bay was 7.622 feet above city datum.

The wier consisted of four openings, each 10.01 in width; the hook gauge was set two feet above the edge of the wier, and the average of all observations of hook gauges plus 2 feet was 3.48265, being the height of discharge on the wier.

The height due to velocity of approach to the wier was determined by float measurements and also by a velocity meter, and the height due to same was found to be 0.04495.

An allowance was also made for friction of efflux conduit through wall of engine house and bulkhead, a distance of 7 feet, and the head due to this friction was found to be 0.0174.

Allowance was made for leaks in wier, absorption, evaporation and leaks through bulkhead into pump pits of 49,562 cubic feet in the 48 hours.

The weight of the water combined with the sewerage as shown by certificates of Fairbanks, Morse & Co. was found to be 62.611 lbs. per cubic foot.

#### FORTY-EIGHT HOUR TEST.

Average height of wier ..... \* 3.4859 H

Height due to velocity of approach ..... 0.04495

Height due to friction of delivery through  
conduit built of masonry ..... 0.01740

Height due to velocity of approach and  
friction ..... 0.06235h

H' the height to be used in the calculation of capacity and duty of pumps, then

$$H' = ((H \times h)^{\frac{3}{2}} - h^{\frac{3}{2}})^{\frac{2}{3}} = (3.54825^{\frac{3}{2}} - 0.06235^{\frac{3}{2}})^{\frac{2}{3}} = 3.54275.$$

Width of wier ..... 40.04

Quantity of water per second =  
 $333 H' \frac{1}{2} \times (40.04 - 0.8 H') = 826.16$   
 826.16 cubic feet per second, or  
 for 48 hours.....142,760.471 cubic ft.  
 Add for loss in 48 hours..... 49,562 " "  


---

 Total capacity in 48 hours...142,810,033 cubic ft.  
 Or, per minute..... 49,587 " "

## DUTY.

Coal consumed in 48 hours.....151,134 lbs.  
 The average head of delivery..... 6.489 ft.  
 The weight of water combined with sewage was found  
 to be 62.611 lbs. per cubic foot.  
 Duty,  $\frac{142,810,033 \times 62.611 \times 6.489}{151,134} = 38,390,605$ .  
 Work done by all four pumps,  $\frac{38,390,605 \times 62.611 \times 6.489}{550} = 610.28$   
 horse-power.

At the conclusion of this test, at your desire, a further test of 24 hours' duration was essayed, using only engine No. 1, taking steam from the north boiler room, with the following results:

## TWENTY-FOUR HOUR TEST, ENGINE NO. 2.

Average height of wier.....1.6645 = H  
 Height due to velocity of approach.....0.0059 = h'  
 Height due to friction of delivery through  
 conduit built of masonry..... 0.188 = h"  
 Height due to velocity of approach and  
 friction.....0.0247 = h



If  $H'$  the height to be used in the calculation of capacity and duty of pumps, then  $H' = ((H \times h)^{\frac{2}{3}} - h^{\frac{2}{3}})^{\frac{3}{2}} = (1.6892^{\frac{2}{3}} - 0.0247^{\frac{2}{3}})^{\frac{3}{2}} = 1.6872$ .

Width of wier, 40.04 feet (4x10.01').

Quantity of water per second =  $333 \times H'^{\frac{3}{2}}$  (40.04—0.8  $H'$ ) =  $3.33 \times 2.191618 \times 38$

.69024 = ..... 282.365 cubic ft.

Or per 24 hours..... 24,396.310 " "

Add to above losses by leaks,

evaporation and others..... 14,538 " "

Total capacity in 24 hours... 24,410,848 cubic ft.

Or per minute..... 16,951 $\frac{98}{100}$  " "

### DUTY.

Coal consumed in 24 hours..... 17,000 lbs.

Average head of delivery..... 3.0476 ft.

The weight of water combined

with sewage..... 62.611 per cubic ft.

Duty =  $\frac{24,410,848 \times 62.611 \times 3.0476}{17,000 \times 100} = \dots\dots\dots 27,399.494$

Work done by the pump (Engine

No. 2) =  $\frac{282.365 \times 62.611 \times 3.0476}{550} = \dots\dots\dots 97\frac{96}{100}$  horse p.

Pressure of steam at engine..... 80.5 lbs.

" " " boilers..... 81.635 lbs.

Vacuum..... 24.21 "

Number of revolutions—total... 147,549

Or, per minute..... 102 $\frac{46}{100}$

### DESCRIPTION OF BOILERS AND MACHINERY.

The machinery consists of four sets of centrifugal pumps, and each set consists of two of Andrews' Cen-



trifugal Cataract pumps, placed in a dry well below the surface of the water in the river, and driven direct by a vertical condensing compound engine, the high pressure cylinder being eighteen inches in diameter, and the low pressure cylinder thirty-four inches diameter, both having thirty-four inches stroke.

The condensers are of the jet type, with independent air pumps. Steam cylinder 10" x 16." Water cylinder 16" x 16."

The pump wheels are cast iron, six feet diameter. Each pump is furnished with a separate supply and discharge pipe, which are three feet four inches diameter at the pump, and increase gradually to four feet six inches by four feet six inches at the outlet.

Each pump is coupled direct to the engine crank shaft, which may be conveniently disconnected, if desired, by removing the coupling bolts. The engines are adapted for running at high speed, and are provided with adjustable cut-off valves. All wearing surfaces are of steel, with boxes of phosphor bronze. There are eight horizontal return tubular boilers, each six feet six inches in diameter, eighteen feet in length, and containing 60 tubes, each four and one-half inches diameter and eighteen feet in length. The boilers are set single in masonry and are provided with cast iron fronts, gates, braces and appurtenances usual in this type of boiler. The boilers are designed and

braced to have a constant pressure of eighty pounds per square inch, and are provided with usual gauges and valves. There are two boiler houses, one on each side of the influent channel, with four boilers in each house. Each set of boilers are connected with a nine inch steam pipe in the engine room, from which smaller branches lead to the different engines. The boilers were fed by two feed steam pumps, each having eight-inch steam and five inch water cylinders.

The pumps as originally constructed have been materially modified with a view of increasing their efficiency, in that the size and form of the blades have been changed, as has also the casing and opening of discharge. Their capacity is shown by the results obtained in the test trial, in which their united capacity, when driven at one hundred and three and forty-six hundredths revolutions per minute, delivered 49,587 cubic feet of water per minute at a head of 6.489 feet, which, if measured from datum, would be 7.622 feet.

In the test engine and pump No. 1, with the pump revolving at the rate of  $102\frac{46}{100}$  revolutions per minute there was delivered at a head of 3.0476 feet 16,951 $\frac{98}{100}$  feet of water per minute, which would indicate that had we been able to test at a head of eight feet the capacity of the pumps would have been somewhat less than as shown while working under a head of 6.489 feet.



The duty per 100 lbs. of coal consumed, as shown in the 48-hour test of all the engines combined working against a head of 6.489 feet, was 38,390,605 foot lbs., while the contract specifies a duty 45,000,000 foot lbs. while working against a head of 8 feet, which, according to drawings and construction of the Works, we assume to be above city datum.

In the 24-hour test with engine No. 1, working against a head of 3.0476 feet, the duty was 27,399,494 foot lbs. for each 100 lbs. of coal consumed.

Our inference is, that if all the pumps were working against a head of 8 feet the duty as shown would probably be increased, and if the pumps were so modified in construction as to have more capacity both the duty and capacity demanded by the contract might be reached, provided stronger and more rigid connecting rods of the engines were provided.

The horse-power developed by all the pumps, as shown by the weight of water elevated in the 48-hour test is 610.28, and the indicated horse-power, is 1581.6.

Deducting 10 per cent. from the indicated horse-power of engines for friction, which we believe to be more than the actual amount, leaves 1423.4 horse-power applied direct to pump shaft, the pumps on which give, in this instance,  $42\frac{8}{10}$  per cent. of useful work, or 38 per cent. of the indicated horse-power.

If the pumps can be reconstructed so as to give an efficiency of 50 per cent. of the indicated horse-power, the capacity can be reached while working against a head of 7 feet.

According to late authorities (see reports of Vienna Exposition, 1873, also of Centennial Exposition at Philadelphia, also Manual for Mechanical Engines, by Daniel Kinnear Clark,) in which efficiency of centrifugal pumps are stated to be from 47 up to 70 per cent. of the horse-power employed.

Pumping machinery erected at Fondi, Southern Italy, having pumps with blades of only four feet in diameter, gave an efficiency of  $47\frac{1}{4}$  per cent. of the indicated horse-power. (See Institute C. E., vol. 79, page 310.)

It is further stated that the efficiency of such pumps increase with an increase of their size.

The design, material used and workmanship of the steam engines and boilers are excellent, with the exception of all the main connecting rods, which we consider not of sufficient strength and rigidity for the purpose intended, and that there is an insufficient supply of water for the purposes of condensation.

We consider the engines and boilers of sufficient strength to perform the work required, provided the efficiency of the pumps can be increased as above stated.



We are of the opinion that the efficiency of these pumps can be materially increased by making the following changes and modifications:

*First.* Increase the area of induction to equal at least that of the outlet, and to do this arrange so that there may be induction on both sides of the pump casing, and in this case it is quite desirable that the shaft pass entirely through the casing and rest upon a pillow block beyond the pump.

*Second.* We also consider that the number of blades should be increased to at least six, and their shape formed in accordance with the best practice.

D. J. WHITEMORE,  
EDWARD HEMBERLE,  
W. W. BAILEY.

NEW YORK, May 22, 1885.

I concur in the elements, results and deductions in the attached Report, and, however much I may approve of and concur in the expressions and recommendations given in the latter part of it, I do not, in the absence of any instructions and requirement on the part of Commissioner of Public Works, feel authorized to submit recommendations which I hold to be extraneous to my duty.

I have the honor to be,

Very truly,

CHAS. H. HASWELL.



The foregoing report showing a lack of both capacity and duty, the machinery is, of course, not accepted, nor any further payments made, a large amount of the contract price being held by the city. The machinery has, however, been used continually and served the purpose required with three-fourths of the present capacity.

Since the test the contractors have designed entirely new pumps, and have constructed and put in two of them; they have been informally tested, and found to be superior to the original pumps, and to fully meet the contract demands of both capacity and duty. The other four pumps are being completed as rapidly as possible, and when in place will be subjected to a formal test by experts. The change in the size and form of the pumps has been made at a very large expense to the contractors, and doubtless entails a heavy loss on them.

#### THE OGDEN DAM,

erected some years ago at the head of the Ogden-Wentworth ditch, near Summit Station, had become so dilapidated that it was deemed necessary to substitute a new structure, an appropriation of \$6,000 having been made for the purpose, in accordance with the recommendations in my last report. The work has been completed, and consists of substantial wide cribs filled with stone, and of somewhat greater length than

the old one. The crest of the new dam is, however, the same as the old one, and exactly as specified in the written agreement providing for its erection. The object of this dam is simply to keep back the water of the Desplaines river at ordinary stages of water. When this river is high or during freshets there is a vast volume of water that passes over the dam and flows, via the Ogden ditch, to the West Branch of the Chicago river, interfering with the useful effect of the South Branch Pumping Works in the manner already heretofore referred to in this and other reports.

To make the dam serviceable in keeping back the water of the Desplaines and render the Pumping Works at all times effective for the purpose for which they were designed, the dam should be built 15 feet high and extend from the elevated lands north, to the banks of the Illinois and Michigan Canal south, a distance of about 1,700 feet. The structure should be broad enough at the top to form a public highway—an improvement greatly needed in the locality—and be provided with a number of sluice gates to admit of the necessary flow of water required to keep the West Branch of the river in good condition, and at the same time permit the full capacity of the Pumping Works to act upon the water and sewage in the South Branch.

A dam of the proportions suggested would be a costly work, and would doubtless cause considerable



damage by overflowing the adjacent lands. This would probably render its construction inexpedient. Consequently, until the Illinois and Michigan Canal is suitably enlarged, or some better plan devised to carry off the sewage entering the river, and the disposal of the filth of the South Fork, there will be times when the condition of the river for brief periods will become foul and objectionable.

With a view of procuring some reliable data that may be useful and necessary to meet this important question and aid in solving the problem, I have caused a survey to be made of the Desplaines river and adjacent territory extending from Summit to Joliet. This work is in charge of Assistant Engineer Francis Murphy, of this Department. Considerable progress has been made in the field, but the office work is not yet sufficiently advanced to admit of submitting the results in this report, as we had expected.

### THE TRAFFIC TUNNEL

Under the river at La Salle street is in good condition, but that at Washington street is just the reverse, owing to its leaky condition. To remedy this defect would, it is believed, involve an extended and costly reconstruction of the masonry, which would probably warrant more desirable changes in the grade of the approaches. A marked improvement has, however, been made to both of these tunnels during the year

by substituting several hundred Edison Incandescent Electric Lights in place of gas jets. The roadways are therefore now much better illuminated. The light is generated by the electric plant located at, and used for, the new City building.

### BRIDGES AND VIADUCTS.

The expenditures for these structures during the year are as follows :

|  |          |    |
|--|----------|----|
| For general repairs of bridges.....  | \$69,424 | 93 |
| Of this amount there was collected from<br>vessels for damage to bridges and for<br>old material sold..... | 7,867    | 61 |
| Making net cost of bridge repairs.....   | \$61,557 | 32 |
| For repairs of viaducts.....   | 13,188   | 84 |
| Total cost of repairs of bridges and via-<br>ducts.....  | \$74,746 | 16 |

The condition of many of the river bridges is by no means equal to the demand upon them. This is especially true of the bridges at State, Twelfth and Eighteenth streets and the viaduct at Indiana street, which have been so frequently referred to in former reports. All of these structures have been kept in as good state of repair as the means at hand would admit. The fact is they have been in use many years, designed to meet the demand of the past and are not therefore adapted to the wants of the present, either in strength or dimensions.



The new double roadway bridge for Lake street crossing of the river is now in process of erection. It is the same style and size as Rush street bridge, except in length, being 20 feet shorter. Its dimensions are 220 feet long and 59 feet wide, and like Rush street it will be operated by steam, and be provided with electric lights. The cost of the bridge will be about \$140,000. It will be ready for use early in May next.

The viaduct over the railway tracks at the west approach to Lake street bridge does not correspond in strength to the river bridge; this fact and the reasons for substituting a new viaduct at this point were submitted and favorably considered by your Honorable Body some time ago, but the work will not be commenced until the liability of the several railway companies interested to share in the expense can be determined. It is hoped, however, that this question may be adjusted at an early day, otherwise the use of the river bridge will be delayed after its completion.

A new iron fixed bridge is under contract, designed to replace the old wooden structure across the Illinois and Michigan Canal at Ashland avenue. It is 128 feet long and will cost about \$6,200.

The new iron viaduct at Erie street, a description of which was given in last report, was put in service



in June last and is a great improvement over the old wood structure.

A new iron viaduct with double roadway has been erected over the railway tracks on Adams street. The structure consists of two spans, one truss 153 feet long and one girder 55 feet long ; each 58 feet wide over all. Its cost, including reconstruction of old foundations, is \$33,462.40, which amount was paid by the Chicago Passenger Street Railway Company as provided by their franchise.

In my annual report for the year 1883, pages 39 to 41, the subject of river bridges and a lake front harbor were briefly referred to.

The fixed limited proportions of the river, the annual increase in the number of vessels requiring accommodations at our docks, and the consequent frequency of open bridges are obstacles that have become not only a serious hindrance to the transaction of ordinary business, but the restrictions placed upon the movements of vessels in the river are calculated to check the growth of the marine commerce of this port, one of the prime factors of commercial prosperity.

How best to permanently unite the three divisions of the city, retaining the river as it is, as a marine highway, for vessels of a suitable class, thereby re-

moving the vexatious interruption and inconvenience to traffic, and promote the growth and prosperity of Chicago, is a question that must be met and determined in the near future. The only relief in sight is a harbor for shipping on the lake front.

As a partial relief to the overcrowded bridges, it is believed that a great improvement could be inaugurated by constructing small tunnels at the principal crossings of the river, designed for pedestrians only. Such channels could be built of cast iron in sections, of suitable form and dimensions, at comparatively small cost, since they need not be large, nor would there be any expense for land damage, as in the case of the approaches to the general traffic tunnels. Moreover, if suitably constructed of the material suggested, they could be made perfectly tight and dry, and lighted with the electric light. Tunnels of this kind would form a safe, reliable and uninterrupted means of intercommunication between the three divisions of the city and prove of great value and convenience to the thousands of foot passengers who are now hourly detained by open bridges. This or some more desirable improvement is a pressing and growing necessity.

### STREETS.

During the year improvements have been made as follows :

|                                      |       |        |
|--------------------------------------|-------|--------|
| Streets paved with cedar blocks..... | 30.47 | miles. |
| “ “ “ sheet asphalt.....             | 0.89  | “      |
| “ “ “ macadam. ....                  | 4.55  | “      |
| “ “ “ asphalt blocks.....            | 0.07  | “      |
| “ “ “ medina stone.....              | 0 38  | “      |
| “ “ “ granite blocks.....            | 1.35  | “      |
| “ “ “ cinders.....                   | 0.36  | “      |

Total number miles improved.....38.07 miles.

In addition streets were cindered and  
graded to the extent of ..... 2.84 “

And by planking..... 0.11 “

Making a total of.....41.02 miles.

| DIVISION.  | Square Yards. | Lineal Feet of Roadway. | Miles of Pavement Laid in 1886. |                              |        | TOTAL COST.          |   |                | Average Cost Per Mile. | Total Miles of Pavement Laid in the City. |                             |                             |                                   |
|------------|---------------|-------------------------|---------------------------------|------------------------------|--------|----------------------|---|----------------|------------------------|---|-----------------------------|-----------------------------|-----------------------------------|
|            |               |                         | Amount Under Assessment.        | Amount of Private Contracts. | Total. | Amount of Contracts. | Cost of Superintendence, Assessment, Etc. | Grand Total.   |                        | Amount Previously Laid.                   | New Pavement Added in 1886. | Total Pavement in the City. | Miles of Pavement Relaid in 1886. |
| South..... | 196,650.56    | 52,634.20               | 9.85                            | 0.12                         | 9.97   | \$467,387.47         | \$23,369.37                               | \$490,756.84   | \$49,223.35            | 63.33                                     | 7.47                        | 76.80                       | 2.98                              |
| West.....  | 503,239.29    | 127,667.90              | 24.18                           | .....                        | 24.18  | 773,491.62           | 38,674.58                                 | 812,166.20     | 33,540.27              | 112.13                                    | 12.27                       | 124.40                      | 11.60                             |
| North..... | 100,987.94    | 96,237.10               | 6.45                            | 0.42                         | 6.87   | 159,318.62           | 7,965.63                                  | 167,284.55     | 24,350.00              | 43.49                                     | 2.27                        | 45.76                       | 1.47                              |
| Total..... | 800,877.79    | 216,549.20              | 40.48                           | 0.54                         | 41.02  | \$1,400,197.71       | \$70,009.58                               | \$1,470,207.59 | \$35,842.77            | 223.95                                    | 22.01                       | 245.96                      | 16.05                             |



The following shows the kind of paving in each division of the city up to December 31st, 1885 :

| DIVISION.   | Wooden<br>Block. | Macadam | Stone. | Asphalt<br>Block. | Sheet<br>Asphalt. | Graveling. | Cinders. | Grand<br>Total. |
|-------------|------------------|---------|--------|-------------------|-------------------|------------|----------|-----------------|
|             | Miles.           | Miles.  | Miles. | Miles.            | Miles.            | Miles.     | Miles.   | Miles.          |
| North ..... | 40.55            | 0.92    | 0.53   | .....             | 1.97              | 0.23       | 1.26     | 45.76           |
| South ..... | 51.20            | 6.54    | 9.49   | 3.68              | 0.15              | 4.38       | 0.36     | 75.80           |
| West .....  | 98.30            | 19.40   | 0.89   | .....             | 0.82              | 2.64       | 7.85     | 124.40          |
| Total ..... | 185.35           | 26.86   | 10.41  | 3.68              | 2.94              | 7.25       | 9.47     | 245.96          |

Repaving and repairs have been made by the department on improved streets in each division of the city as follows :

|                      |        |              |
|----------------------|--------|--------------|
| South Division ..... | 18,471 | square yards |
| West " .....         | 19,792 | " "          |
| North " .....        | 8,238  | " "          |
| Total .....          | 46,501 | square yards |

The planking of streets where the property-owners furnished the material and the city the labor is not included in the above table.

### STREET RAILWAYS.

During the year street railway companies have laid various kinds of pavement in the space occupied by their tracks in the streets of the city, as indicated in the following table:

| CORPORATIONS.                | Boulder<br>Stone,<br>Sq're Yds. | Granite<br>Block,<br>Sq're Yds. | Pine<br>Block,<br>Sq're Yds. | Total<br>Square<br>Yards. |
|------------------------------|---------------------------------|---------------------------------|------------------------------|---------------------------|
| Chicago City Railway Co..... |                                 | 21,115                          |                              | 21,115                    |
| Chicago W. Div. Railway Co.. | 32,425                          |                                 | 22,339                       | 54,764                    |
| N. Chicago City Railway Co.. |                                 |                                 | 3,920                        | 3,920                     |
| Total.....                   | 32,425                          | 21,115                          | 26,259                       | 79,799                    |

The total miles of street occupied and operated by the various railroad companies is as follows:

|                                       |                    |
|---------------------------------------|--------------------|
| North Chicago City Railway Co.....    | 17.88 miles        |
| Chicago City Railway Co.....          | 28.80 "            |
| Chicago West Division Railway Co..... | 40.50 "            |
| Chicago Passenger Railway Co.....     | 3.07 "             |
| Total.....                            | <u>90.25 miles</u> |

### SIDEWALKS.

Sidewalks composed of various kinds of material have been constructed, and walks repaired as noted in the following table:

| DIVISION.  | MATERIAL. |        |          | Total<br>Miles. | Side-<br>walks<br>Repair'd. | Total<br>Work. |
|------------|-----------|--------|----------|-----------------|-----------------------------|----------------|
|            | Wood.     | Stone. | Concrete |                 |                             |                |
| South..... | 19.00     | 1.93   | 0.37     | 21.30           | 17.03                       | 38.33          |
| West.....  | 39.06     | 3.13   | 0.40     | 42.59           | 25.46                       | 68.05          |
| North..... | 13.36     | 2.92   | 0.08     | 16.36           | 1.33                        | 17.69          |
| Totals...  | 71.42     | 7.98   | 0.85     | 80.25           | 43.82                       | 124.07         |

There was 34.70 miles of walk laid in streets on which sidewalks were never previously constructed. About  $17\frac{1}{4}$  miles of sidewalk, ranging from 4 feet to 16 feet wide, were constructed by employes connected with the Bureau of Streets, and the balance was built by contractors for property owners.

The following is a statement showing the total number of miles of sidewalk laid in the city, including walks constructed on streets or boulevards controlled by the Park Commissioners:

|                                  | MATERIAL. |        |           | Total Miles. |
|----------------------------------|-----------|--------|-----------|--------------|
|                                  | Wood.     | Stone. | Concrete. |              |
| City... ..                       | 746.60    | 65.54  | 12.04     | 824.18       |
| Boulevards to West Parks... ..   |           | 6.06   | .....     | 6.06         |
| Boulevards to South Parks... ..  |           | 7.77   | .....     | 7.77         |
| Boulevards to Lincoln Park... .. |           | 0.75   | .....     | 0.75         |
| Total Miles in the City...       | 746.60    | 80.12  | 12.04     | 838.76       |

### STREET CLEANING.

There was 2,626.47 miles of improved streets swept and cleaned during the past year, under contract by Messrs. Cooper and Walsh, for \$35 per mile, making a total cost of \$91,926.45. The work was commenced on the 23d day of April and discontinued on the 4th day of December, 1885.

## STREET LAMPS.

| DIVISION.    | GAS LAMPS.                       |                                 |                        | OIL LAMPS.                       |                                 |                        |                                 |        |
|--------------|----------------------------------|---------------------------------|------------------------|----------------------------------|---------------------------------|------------------------|---------------------------------|--------|
|              | No. of Gas Lamps in use in 1884. | No. of Gas Lamps added in 1885. | Total Number of Lamps. | No. of Oil Lamps in use in 1884. | No. of Oil Lamps added in 1885. | Total Number of Lamps. | Less No. replaced by Gas Lamps. | Total. |
| West.....    | 7,558                            | 594                             | 8,152                  | 1,319                            | 908                             | 2,227                  | 118                             | 3,109  |
| South.....   | 3,586                            | 223                             | 3,809                  | 787                              | 175                             | 962                    | 64                              | 898    |
| North .....  | 2,549                            | 59                              | 2,608                  | 571                              | 78                              | 649                    | 15                              | 634    |
| Totals ..... | 13,693                           | 876                             | 14,569                 | 2,677                            | 1,161                           | 3,838                  | 197                             | 3,641  |

Total number of street lamps in the city, 18,210.

## EXPENSES OF LIGHTING.

| COMPANIES.           | No. of Cubic Feet consumed. | Amount.      | Repairs, New Services, etc. | Lighting Cleaning and Extinguishing. | Thawing and Alcohol. | Total.       |
|----------------------|-----------------------------|--------------|-----------------------------|--------------------------------------|----------------------|--------------|
| P. G. L. & C. Co.... | 161,704,712                 | \$242,557 06 | \$17,827 57                 | \$42,478 35                          | \$4,228 70           | \$307,091 68 |
| C. G. L. & C. Co.... | 127,904,428                 | 159,880 45   | 7,384 29                    | 34,039 95                            | 5,720 40             | 207,025 12   |

Total cost of lighting and

maintaining gas lamps

\$514,116 80

Illinois Street Gas Co., for

material and lighting

oil lamps.....

73,858 53

For lamp-posts, repairing

and making lamps, in-

cluding glass..... \$16,681 19



Less amount received from

Special Assessment

|                 |            |             |
|-----------------|------------|-------------|
| Department..... | \$3,066 00 | \$13,615 19 |
|-----------------|------------|-------------|

Total cost of lighting

|               |  |              |
|---------------|--|--------------|
| the city..... |  | \$601,590 52 |
|---------------|--|--------------|

The contract for gas per one thousand cubic feet was:

|   |        |
|---|--------|
| P. G. L. & C. Co., Jan. 1 to Dec. 31, 1885..... | \$1 50 |
|---|--------|

|                                  |      |
|----------------------------------|------|
| C. G. L. & C. Co., " " " " ..... | 1 25 |
|----------------------------------|------|

The total cost for gas per lamp was as follows:

#### WEST DIVISION.

|  |         |
|--|---------|
| For gas consumed, per lamp, per annum..... | \$30 89 |
|--|---------|

|   |      |
|---|------|
| For lighting and maintenance by the Co..... | 8 47 |
|---|------|

|   |      |
|---|------|
| For new lamps and repairs by the city ..... | 0 93 |
|---|------|

|            |         |
|------------|---------|
| Total..... | \$40 29 |
|------------|---------|

#### NORTH AND SOUTH DIVISIONS.

|   |         |
|---|---------|
| For gas, consumed, per lamp, per annum..... | \$24 76 |
|---|---------|

|   |      |
|---|------|
| For lighting and maintenance by the Co..... | 6 39 |
|---|------|

|   |    |
|---|----|
| For new lamps and repairs by the city ..... | 93 |
|---|----|

|            |         |
|------------|---------|
| Total..... | \$32 08 |
|------------|---------|

Cost of maintaining oil lamps for the year, as

|                                  |         |
|----------------------------------|---------|
| per contract, for each lamp..... | \$16 08 |
|----------------------------------|---------|

Twenty-three thousand eight hundred and forty-two lamps have been repaired, being an average of

65 per day; 3,102 new lamps were made; of these 773 were street sign lamps.

### PARKS.

There was expended during the year for the various parks under control of this department the following sums, to-wit: being the full amounts appropriated for the purpose.

#### SOUTH DIVISION.

|                                       |            |
|---------------------------------------|------------|
| Lake Park, 1st and 2d Wards.....      | \$1,781 21 |
| Ellis Park, 4th Ward.....             | 984 87     |
| Douglas Monument Square, 4th Ward.... | 623 10     |
| Aldine Square, 4th Ward.....          | 600 00     |

#### WEST DIVISION.

|                              |            |
|------------------------------|------------|
| Vernon Park, 8th Ward.....   | \$1,245 85 |
| Union Park, 11th " .....     | 3,265 06   |
| Jefferson Park, 11th " ..... | 1,310 32   |
| Campbell Park, 12th " .....  | 1,330 11   |
| Wicker Park, 14th " .....    | 801 16     |

#### NORTH DIVISION.

|                                   |                    |
|-----------------------------------|--------------------|
| Union Square, 18th Ward.....      | \$1,100 00         |
| Washington Square, 18th Ward..... | 1,240 25           |
| Total for 11 parks.....           | <u>\$14,281 93</u> |

Union and Jefferson Parks, in the West Division, were, by ordinance of City Council passed Oct. 9th, 1885, transferred to the jurisdiction of the West Chicago Park Commissioners, and accepted by the latter body on the 12th of the same month. Vernon and Wicker Parks were also transferred to the same Board of Park Commissioners, the former by act of Council Oct. 12th, and the latter Oct. 26th, 1885. They were formally accepted Nov. 9th following. The city will therefore be relieved of the care of these four parks.

The following tabulated statement shows the extent of the public highways in the city:

## STREETS.

| Width of Street.....        | 150'      | 140'     | 130'     | 100'        | 90'       | 80'         | 75'       | 70'       | 66'          | 60'       | 55'       | 40'       | 30'       | 25'      | Grand<br>Total. |
|-----------------------------|-----------|----------|----------|-------------|-----------|-------------|-----------|-----------|--------------|-----------|-----------|-----------|-----------|----------|-----------------|
| Length of Streets in Miles. | 2.972     | 0.160    | 0.340    | 19.416      | 2.484     | 66.354      | 11.348    | 4.548     | 415.713      | 25,500    | 17,633    | 16,269    | 29,089    | 8,923    | 615,779         |
| Area of Streets—Sq. Yards   | 261,583.3 | 13,222.2 | 24,000.0 | 1,139,097.6 | 131,150.0 | 3,114,213.3 | 499,308.3 | 189,767.7 | 16,096,402.6 | 787,542.2 | 568,956.6 | 381,777.7 | 511,066.4 | 57,537.0 | 23,773,494.9    |

Area of roadway of streets, exclusive of sidewalks, 23,469,212.9 square yards, or 4,849.0 acres.  
 Area of streets, inclusive of sidewalks..... 23,773,494.9 " 4,911.88 "  
 Approximate total area of sidewalks..... 304,282.0 " 62.87 "

## ALLEYS.

| Width of Alleys.....       | 50'   | 44'   | 40'   | 30'   | 24'   | 20'    | 18'    | 17'   | 16'     | 15'    | 13'    | 10'    | 8'    | 4'    | Grand<br>Total. |
|----------------------------|-------|-------|-------|-------|-------|--------|--------|-------|---------|--------|--------|--------|-------|-------|-----------------|
| Length of Alleys in Miles. | 0.155 | 0.009 | 0.555 | 2.719 | 4.608 | 20,760 | 40,010 | 1,200 | 146,220 | 48,500 | 22,070 | 19,890 | 2,360 | 0.470 | 309,529         |

The above tabular statement gives the result of scale measurement of Streets and Alleys in the City in columns of their respective width. The grand total seems to deviate from a former Resume given in the Report of 1879, but as there is reason to suppose that the total of that year was in all probability based upon a more superficial count, the discrepancy may be accounted for. The rather excessive width of Alleys is explained by the fact that thoroughfares without names were put under Alleys.

## BOULEVARDS.

| Width of Boulevards.....          | 100'     | 165'     | 200'      | 250'      | 400'     | Grand<br>Total.            |
|-----------------------------------|----------|----------|-----------|-----------|----------|----------------------------|
| Length of Boulevards in feet..... | 2,310    | 2,600    | 5,230     | 25,315    | 1,450    | 38,905                     |
| Area in Square Yards.....         | 25,666.6 | 47,666.6 | 116,222.2 | 703,194.4 | 64,444.4 | 957,194.2 or 197.76 acres. |



## SPECIAL ASSESSMENTS.

The following table shows the number of assessments made for various improvements during the past year, together with the total amount assessed, the same being \$2,889,544.80:

COMMISSIONER'S REPORT.

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SPECIAL ASSESSMENTS HAVE BEEN LEVIED AS FOLLOWS:

| DIVISION.   | Improving Roadways of Streets and Alleys. |              | Laying Private Sewer Drains.    |             | Laying Water Service Pipes.     |              | Opening Streets and Alleys.     |              | Constructing Sidewalks.         |              | Gas Lamps.                      |             | Oil Lamps.                      |            | GRAND TOTAL.                    |               |
|-------------|---|--------------|---------------------------------|-------------|---------------------------------|--------------|---------------------------------|--------------|---------------------------------|--------------|---------------------------------|-------------|---------------------------------|------------|---------------------------------|---------------|
|             | No. of Independent Assessments.           | Amount.      | No. of Independent Assessments. | Amount.     | No. of Independent Assessments. | Amount.      | No. of Independent Assessments. | Amount.      | No. of Independent Assessments. | Amount.      | No. of Independent Assessments. | Amount.     | No. of Independent Assessments. | Amount.    | No. of Independent Assessments. | Amount.       |
| North.....  | 37  | \$445,014 40 | 25                              | \$16,893 00 | 26                              | \$19,526 45  | 3                               | \$14,572 83  | 19                              | \$5,461 61   | 26                              | \$4,940 64  | 5                               | \$654 10   | 140                             | \$ 507,282 30 |
| South.....  | 39  | 602,525 73   | 18                              | 33,785 50   | 21                              | 38,573 90    | 5                               | 68,915 26    | 46                              | 50,146 75    | 16                              | 4,474 12    | 8                               | 1,694 85   | 153                             | 800,116 11    |
| West.....   | 97  | 1,329,137 93 | 53                              | 34,972 73   | 60                              | 56,147 10    | 5                               | 45,480 38    | 167                             | 5,805 97     | 69                              | 25,009 05   | 28                              | 5,623 50   | 489                             | 1,582,176 60  |
| Totals..... | 173                                       | 2,376,678 06 | 96                              | \$85,561 23 | 106                             | \$114,387 45 | 13                              | \$128,968 47 | 232                             | \$141,044 33 | 111                             | \$34,432 81 | 51                              | \$7,972 45 | 782                             | 2,889,544 80  |

Under the provision of Section 608 of the Revised Code all new subdivisions of property are subject to the approval of the Examiner of Subdivisions, an officer of this Department. The ordinance is silent as to what particular features of a new subdivision require approval. It may be assumed, therefore, that the principal if not the only object in view, is to officially pass upon the width and course of the streets and alleys to be dedicated to public use in their practical relative bearings with contiguous streets and alleys.

It will be observed by reference to the map of the city that the continuity of many important thoroughfares and alleys is broken by the streets and alleys of new subdivisions being laid out without any reference to the lines of the old connecting highways. The result is that instead of a continuous street or alley we find a zig-zag course established through succeeding blocks. This is neither desirable nor convenient, and should be remedied by withholding the certificate of approval, unless the public highways are designed to correspond in width and alignment with those already laid out and in use.

The recommendations of Superintendent Jones in his last Annual Report, pages 227 to 231, in regard to certain important and economic changes in the method of preparing for improvements by special

assessments, are again urged upon the attention of your Honorable Body as worthy of favorable consideration.

### THE NEW CITY BUILDING.

During the past year all of that portion of the building occupied by officers of the city government has been fully completed. The walls of all the offices and the public corridors have been handsomely frescoed. The principal entrances, at La Salle, Washington and Randolph streets, are also fully completed in a substantial and artistic manner.

The Edison electric light plant was put in successful operation during the latter part of the year, and has continued to work in a highly satisfactory manner. This plant furnishes light for the entire building and both the traffic tunnels under the river. These tunnels require the continuous operation of the machinery day and night. The volume and character of the light in both the city building and the tunnels are a marked improvement over the old method of lighting.

The amount expended in the construction and completion of the building during the past year is.....\$ 124,527 81  
The amount previously expended..... 1,496,973 88

---

Total expenditure to December 31,  
1885.....\$1,621,501 69



## Amount due on uncompleted contracts

|   |                       |
|---|-----------------------|
| January 1st, 1886.....  | \$8,887 25            |
| Estimated amount necessary to fully<br>complete the building..... | 62,000 00             |
| Total cost when entirely finished.                                | <u>\$1,692,388 94</u> |

The Commissioner of Buildings, in his report, says a certain class of people has annually predicted "that the building season will be less active this year than last; that Chicago has reached the acme of her building boom," but it has invariably resulted in the discovery that these prophecies were false, as may be seen by a glance at the following tabulated statement:

4,638 buildings were erected during the year, covering an aggregate frontage of 108,952 lineal feet, or over 20½ miles, involving an estimated expenditure of \$24,330,875.

| DIVISION.  | No. of<br>Buildings<br>Erected. | Aggregate<br>Frontage<br>in Feet. | Frontage<br>in<br>Miles. | Estimated<br>Value. |
|------------|---------------------------------|-----------------------------------|--------------------------|---------------------|
| North..... | 744                             | 19,836                            | 3.8                      | \$ 5,229,625 00     |
| South..... | 1,122                           | 25,941                            | 4.9                      | 8,436,375 00        |
| West.....  | 2,772                           | 63,073                            | 11.9                     | 10,664,875 00       |
| Totals.... | 4,638                           | 108,850                           | 20.6                     | \$24,330,875 00     |

## COMPARISON WITH THREE PREVIOUS YEARS.

|                       |        |         |      |                 |
|-----------------------|--------|---------|------|-----------------|
| 1882.....             | 3,113  | 73,161  | 13.8 | \$19,803,500 00 |
| 1883.....             | 4,086  | 85,588  | 16.2 | 21,875,000 00   |
| 1884.....             | 4,169  | 98,782  | 18.6 | 25,862,000 00   |
| 1885.....             | 4,638  | 108,850 | 20.6 | 24,339,875 00   |
| Totals for 4 years... | 16,006 | 366,381 | 69.2 | \$91,871,375 00 |

In addition to the foregoing statistics in connection with building operations there were moved during the past year, under the supervision of this department, 670 frame and 23 brick buildings, making a total of 693 buildings from one to four stories high, and representing in the aggregate 14,267 lineal feet, or over  $2\frac{1}{3}$  miles of frontage.

In closing this report but a few days before closing my official connection with the department, after a service of thirty-three years, I avail myself of the opportunity to express my obligations and thanks to His Honor the Mayor for evidences of his confidence and for his valued counsel and official co-operation.

To the gentlemen of the City Council I am also indebted for their kindly consideration and courtesies.

The faithful and efficient services of the heads of the various Bureaus and their subordinates have contributed largely towards the accomplishment of the work of the year.

Respectfully submitted,

A handwritten signature in cursive script, reading "D. B. Clegg". The signature is fluid and elegant, with a large initial "D" and a prominent "C" for "Clegg".

*Commissioner.*

## ENGINEER'S REPORT.

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HON. DEWITT C. CREGIER,

*Commissioner of Public Works:*

SIR: I present, herewith, the Tenth Annual Report of the Bureau of Engineering, being for the year 1885:

### WATER SUPPLY.

The total quantity of water delivered to the city during the year is 33,451,386,865 gallons—a daily average of 91,647,632 gallons, or about 14.22 per cent. more than the average for the year 1884. During the month of February the average daily quantity pumped was 101,136,176 gallons, which is the greatest of the year. In November the average daily quantity pumped was 85,964,812 gallons, which is the least of the year. The greatest quantity pumped in a single day was on February 19—111,100,595 gallons. The least quantity pumped was on November 22—74,283,235 gallons, a difference of 36,817,360 gallons.

The greatest quantity of water pumped during the year was in the months of January, February, March,



July, August, September, October and December, and the days in which the quantity exceeded 100,000 gallons were the following:

|          |         |             |
|----------|---------|-------------|
| January  | 19..... | 103,584,890 |
| "        | 20..... | 103,702,775 |
| "        | 21..... | 104,788,610 |
| "        | 22..... | 105,698,580 |
| "        | 23..... | 104,257,525 |
| "        | 24..... | 100,081,620 |
| "        | 26..... | 102,744,085 |
| "        | 27..... | 101,674,110 |
| "        | 28..... | 104,114,910 |
| "        | 29..... | 105,514,830 |
| February | 10..... | 102,525,075 |
| "        | 11..... | 106,369,750 |
| "        | 12..... | 105,511,675 |
| "        | 13..... | 106,694,365 |
| "        | 14..... | 106,138,615 |
| "        | 16..... | 107,095,620 |
| "        | 17..... | 109,125,950 |
| "        | 18..... | 110,722,565 |
| "        | 19..... | 111,100,595 |
| "        | 20..... | 111,014,535 |
| "        | 21..... | 109,803,230 |
| "        | 22..... | 100,236,575 |
| "        | 23..... | 107,057,510 |
| "        | 24..... | 107,297,680 |
| "        | 25..... | 105,985,380 |
| "        | 26..... | 101,830,130 |
| March    | 21..... | 102,535,970 |
| July     | 20..... | 104,401,820 |
| "        | 28..... | 103,254,155 |

|          |         |             |
|----------|---------|-------------|
| July     | 29..... | 101,711,950 |
| "        | 30..... | 103,418,585 |
| "        | 31..... | 103,137,190 |
| August   | 1.....  | 102,385,900 |
| December | 7.....  | 102,294,775 |

The following tabulated statement shows the operations in detail of both North and West Pumping Works during the year 1885:

## OPERATIONS OF BOTH PUMPING WORKS COMBINED.

| MONTHS.<br>1885.          | No. of Days. | Total No. of Gallons of Water Pumped per Month, less 5% per cent. for loss of Action. | Average No. of Gallons of Water Pumped per Day, less 5% per cent. for loss of Action. | Pounds of Coal consumed per Month for Pumping. | Average No. of Pounds of Coal consumed per Month for Pumping. | Average Head against Pumps in feet. |
|---------------------------|--------------|---|---|--|---|-------------------------------------|
| January ...               | 31           | 2,947,915,900   | 95,094,061  | 4,257,530                                      | 137,340   | 94.4                                |
| February...               | 28           | 2,831,812,180   | 101,136,170   | 4,957,870                                      | 177,067   | 107.7                               |
| March.....                | 31           | 2,927,572,145   | 94,437,811  | 4,907,850                                      | 158,318   | 108.9                               |
| April.....                | 30           | 2,580,216,375   | 86,007,212  | 4,332,860                                      | 144,402   | 108.9                               |
| May.....                  | 31           | 2,676,617,045   | 86,342,485  | 4,493,300                                      | 144,945   | 112.5                               |
| June.....                 | 30           | 2,691,567,215   | 89,718,907  | 4,471,160                                      | 149,038   | 108.3                               |
| July.....                 | 31           | 2,937,501,025   | 94,758,097  | 4,696,800                                      | 151,489   | 107.3                               |
| August....                | 31           | 2,898,428,355   | 93,497,689  | 4,842,770                                      | 156,218   | 109.3                               |
| September..               | 30           | 2,763,810,205   | 92,127,006  | 4,680,490                                      | 156,016   | 109.8                               |
| October....               | 31           | 2,800,854,350   | 90,350,140  | 4,723,860                                      | 152,382   | 110.6                               |
| November..                | 30           | 2,578,944,370   | 85,964,812  | 4,360,210                                      | 145,340   | 109.9                               |
| December..                | 31           | 2,816,147,100   | 90,843,455  | 4,715,210                                      | 152,103   | 105.5                               |
| Totals....                | 365          | 33,451,386,865  | .....   | 55,438,490                                     | .....   | .....                               |
| General av.<br>per M..... | .....        | 2,786,782,289   | .....   | 4,619,874                                      | .....   | 107.75                              |
| General av.<br>per D..... | .....        | .....   | 91,647,632  | .....  | 151,886   | .....                               |

NOTE.—Coal for heating building and pumping out wells included in above statement. Petroleum oil used with coal for pumping at West Works during January. Anthracite coal used at North Works and bituminous coal at West Works.

The quantity of water pumped by both Works, and the cost of the same for the past two years, was as follows:

| YEAR.         | PUMPING.                 |                | COST.        |                                      |
|---------------|--------------------------|----------------|--------------|--------------------------------------|
|               | Total Number of Gallons. | DAILY AVERAGE. | TOTAL COST.  | Average Cost per Million Gallons.    |
| 1884          | 29,286,584,645           | 80,017,990     | \$187,697 46 | \$6 40 <sup>3</sup> / <sub>100</sub> |
| 1885          | 33,451,386,865           | 91,647,632     | 196,795 88   | 5 88 <sup>3</sup> / <sub>100</sub>   |
| Increase..... | 4,164,802,400            | 11,629,642     | 9,098 42     | * 0 52 <sup>3</sup> / <sub>100</sub> |

\* Decrease.

TABLE SHOWING QUANTITY OF WATER PUMPED BY BOTH PUMPING WORKS COMBINED, EACH MONTH DURING PAST NINE YEARS.

| Months.         | 1877.          | 1878.          | 1879.          | 1880.          | 1881.          | 1882.          | 1883.          | 1884.          | 1885.          |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| January .....   | 1,582,900,385  | 1,561,666,968  | 1,984,699,694  | 1,567,144,633  | 2,045,483,094  | 1,895,503,493  | 2,397,281,870  | 2,553,536,065  | 2,947,915,900  |
| February .....  | 1,404,949,448  | 1,401,548,987  | 1,758,754,626  | 1,533,195,592  | 1,872,180,080  | 1,724,637,947  | 2,228,122,940  | 2,289,600,000  | 2,831,812,180  |
| March .....     | 1,543,493,780  | 1,566,311,019  | 1,929,889,148  | 1,675,170,272  | 1,950,068,091  | 1,926,851,744  | 2,295,974,480  | 2,416,255,615  | 2,927,572,145  |
| April .....     | 1,531,896,815  | 1,379,902,942  | 1,500,367,146  | 1,658,718,639  | 1,802,701,896  | 1,832,587,508  | 2,087,973,690  | 2,174,058,000  | 2,580,216,375  |
| May .....       | 1,628,002,813  | 1,421,128,064  | 1,639,993,231  | 1,781,045,297  | 1,897,887,027  | 2,000,339,237  | 2,140,935,205  | 2,305,090,420  | 2,676,617,945  |
| June .....      | 1,596,653,865  | 1,524,233,984  | 1,576,121,026  | 1,813,621,318  | 1,870,242,288  | 2,067,911,204  | 2,172,518,075  | 2,260,858,220  | 2,691,567,215  |
| July .....      | 1,733,282,814  | 1,903,916,563  | 1,785,393,119  | 1,917,520,346  | 2,148,595,588  | 2,161,655,292  | 2,343,731,680  | 2,462,288,300  | 2,837,501,025  |
| August .....    | 1,732,442,419  | 1,907,143,614  | 1,804,760,439  | 1,898,248,864  | 2,231,316,966  | 2,179,598,931  | 2,376,804,930  | 2,713,985,865  | 2,898,428,855  |
| September ..... | 1,648,279,066  | 1,772,067,650  | 1,695,023,876  | 1,798,031,710  | 2,080,423,132  | 2,132,913,799  | 2,217,346,100  | 2,632,908,325  | 2,763,810,305  |
| October .....   | 1,623,377,776  | 1,751,855,733  | 1,705,802,358  | 1,779,878,722  | 1,923,812,991  | 2,006,791,910  | 2,228,119,870  | 2,528,639,070  | 2,800,854,350  |
| November .....  | 1,509,431,581  | 1,631,523,798  | 1,550,462,037  | 1,705,207,141  | 1,891,799,714  | 2,014,994,563  | 2,060,391,540  | 2,358,616,985  | 2,578,944,370  |
| December .....  | 1,512,272,884  | 1,742,988,910  | 1,629,414,281  | 1,881,899,401  | 1,796,724,962  | 2,107,068,346  | 2,304,711,210  | 2,590,746,480  | 2,816,147,100  |
| Totals .....    | 19,047,104,636 | 19,564,288,222 | 20,557,690,981 | 21,002,681,905 | 23,331,785,879 | 24,150,943,884 | 26,741,941,090 | 29,286,584,465 | 33,451,386,865 |



TABLE SHOWING TOTAL QUANTITY OF WATER PUMPED BY BOTH PUMPING WORKS COMBINED.

TOGETHER WITH ANNUAL AND DAILY INCREASE IN QUANTITY AND RATE PER CENT.; ALSO THE GREATEST DAILY AVERAGE FOR A SINGLE MONTH FOR THE FOLLOWING YEARS.

| YEAR.     | Total Quantity Pumped, Gallons. | Annual Increase, Gallons. | Average Daily Quantity Pumped, Gallons. | Average Daily Increase, Gallons. | Per Cent. of Annual Increase. | GREATEST DAILY AVERAGE. |             |
|-----------|---------------------------------|---------------------------|---|----------------------------------|-------------------------------|-------------------------|-------------|
|           |                                 |                           |   |                                  |                               | Month.                  | Gallons.    |
| 1876..... | 15,346,922,158                  | .....                     | 41,931,481                              | .....                            | .....                         | December.....           | 47,063,724  |
| 1877..... | 19,047,104,636                  | 3,700,182,478             | 52,183,892                              | 10,252,411                       | 24.45                         | July.....               | 55,912,350  |
| 1878..... | 19,564,288,232                  | 517,183,596               | 53,600,789                              | 1,416,897                        | 2.71                          | August.....             | 61,520,762  |
| 1879..... | 20,557,690,981                  | 993,402,749               | 56,322,441                              | 2,721,652                        | 5.07                          | January.....            | 64,022,571  |
| 1880..... | 21,002,681,905                  | 444,990,924               | 57,384,376                              | 1,061,935                        | 2.16                          | July.....               | 61,855,495  |
| 1881..... | 23,331,785,879                  | 2,329,103,974             | 63,922,700                              | 6,538,324                        | 11.09                         | August.....             | 71,977,967  |
| 1882..... | 24,150,943,884                  | 819,158,005               | 66,166,969                              | 2,244,269                        | 3.51                          | September.....          | 71,097,126  |
| 1883..... | 26,741,941,090                  | 2,590,997,206             | 73,265,592                              | 7,098,623                        | 10.72                         | February.....           | 79,575,819  |
| 1884..... | 29,286,584,465                  | 2,544,643,375             | 80,017,990                              | 6,752,398                        | 9.52                          | September.....          | 87,763,610  |
| 1885..... | 33,451,386,865                  | 4,164,802,400             | 91,647,632                              | 11,629,642                       | 14.22                         | February.....           | 101,136,176 |

# TABULAR STATEMENT OF THE CONSUMPTION AND WASTE OF WATER, RELATIVE PUMPING CAPACITY, POPULATION, PIPES, REVENUE, ETC.

| YEAR.                | WATER DISTRIBUTED DAILY IN U. S. GALLONS. |                         |   |  |                              |                         |                                    |                                     |   |                    | REVENUE.                                 |                    | TAPS.                   |                        |                         | PIPE.                             |                     |                       | POPULATION.             |  |                |                         |
|----------------------|---|-------------------------|---|--|------------------------------|-------------------------|------------------------------------|-------------------------------------|---|--------------------|--|--------------------|-------------------------|------------------------|-------------------------|-----------------------------------|---------------------|-----------------------|-------------------------|--|----------------|-------------------------|
|                      | Actual Supply.                            | Per cent. of In-crease. | Estimated at one Sixth Annual Increase. | Estimated made in 1850 based on 35 Gallons per Inhabitant. | Quantity to each Inhabitant. | Per cent. of In-crease. | Average Quantity per Mile of Pipe. | Capacity of Works per Mile of Pipe. | Average Quantity for one Dollar per year. | Capacity of Works. | Proportion of City to Quantity Supplied. | Amount Collec- ed. | Per cent. of In-crease. | Number of Taps In Use. | Per cent. of In-crease. | No. of Inhabit- ants to each Tap. | Miles of Pipe Laid. | Miles of Pipe in Use. | Per cent. of In-crease. | No. of Inhabit- ants per Mile of Pipe. | Total Numbers. | Per cent. of In-crease. |
| 1858                 | 2,991,413                                 | 29.61                   | 3,480,980                               | 2,940,000  | 32.8                         | 41.317                  | 279,343                            | 20,000,000                          | 641                                       | 1 to 6.7           | 4,096,701                                | 30.32              | 18.10                   | 4,096                  | 18.10                   | 10.91                             | 17.7                | 17.7                  | 17.7                    | 1.57                                   | 91,000         | 17.7                    |
| 1859                 | 3,877,119                                 | 29.61                   | 4,366,686                               | 2,930,000  | 43.0                         | 45.559                  | 255,017                            | 20,000,000                          | 705                                       | 1 to 6.2           | 4,278,782                                | 30.32              | 17.2                    | 4,278                  | 17.2                    | 10.91                             | 17.2                | 17.2                  | 17.2                    | 1.57                                   | 100,200        | 30.06                   |
| 1860                 | 4,913,251                                 | 29.61                   | 5,400,000                               | 2,920,000  | 43.0                         | 50.821                  | 240,821                            | 20,000,000                          | 832                                       | 1 to 5.9           | 4,464,295                                | 30.32              | 14.58                   | 4,464                  | 14.58                   | 10.91                             | 14.58               | 14.58                 | 14.58                   | 1.57                                   | 108,186        | 28.47                   |
| 1861                 | 6,074,730                                 | 29.61                   | 6,561,900                               | 2,910,000  | 43.9                         | 56.461                  | 230,657                            | 20,000,000                          | 915                                       | 1 to 5.8           | 4,650,000                                | 30.32              | 0.41                    | 4,650                  | 0.41                    | 10.91                             | 0.41                | 0.41                  | 0.41                    | 1.57                                   | 118,186        | 28.47                   |
| 1862                 | 6,800,286                                 | 10.08                   | 7,291,000                               | 2,900,000  | 40.8                         | 65.961                  | 217,100                            | 20,000,000                          | 700                                       | 1 to 5.9           | 4,836,000                                | 30.32              | 18.45                   | 4,836                  | 18.45                   | 10.91                             | 18.45               | 18.45                 | 18.45                   | 1.57                                   | 128,186        | 28.47                   |
| 1863                 | 7,610,450                                 | 10.08                   | 8,101,000                               | 2,890,000  | 40.8                         | 73.961                  | 190,657                            | 20,000,000                          | 700                                       | 1 to 5.9           | 5,022,000                                | 30.32              | 12.57                   | 5,022                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 138,186        | 28.47                   |
| 1864                 | 8,421,250                                 | 10.08                   | 8,912,000                               | 2,880,000  | 40.8                         | 81.961                  | 173,310                            | 20,000,000                          | 693                                       | 1 to 5.9           | 5,208,000                                | 30.32              | 12.57                   | 5,208                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 148,186        | 28.47                   |
| 1865                 | 9,232,336                                 | 14.07                   | 9,723,000                               | 2,870,000  | 43.3                         | 89.961                  | 157,100                            | 20,000,000                          | 681                                       | 1 to 5.9           | 5,394,000                                | 30.32              | 12.57                   | 5,394                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 158,186        | 28.47                   |
| 1866                 | 10,043,406                                | 8.65                    | 10,534,000                              | 2,860,000  | 43.3                         | 97.961                  | 141,605                            | 20,000,000                          | 681                                       | 1 to 5.9           | 5,580,000                                | 30.32              | 12.57                   | 5,580                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 168,186        | 28.47                   |
| 1867                 | 10,854,476                                | 8.01                    | 11,345,000                              | 2,850,000  | 43.3                         | 105.961                 | 126,105                            | 20,000,000                          | 674                                       | 1 to 5.9           | 5,766,000                                | 30.32              | 12.57                   | 5,766                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 178,186        | 28.47                   |
| 1868                 | 11,665,546                                | 7.35                    | 12,156,000                              | 2,840,000  | 43.3                         | 113.961                 | 111,105                            | 20,000,000                          | 664                                       | 1 to 5.9           | 5,952,000                                | 30.32              | 12.57                   | 5,952                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 188,186        | 28.47                   |
| 1869                 | 12,476,616                                | 7.35                    | 12,967,000                              | 2,830,000  | 43.3                         | 121.961                 | 96,105                             | 20,000,000                          | 644                                       | 1 to 5.9           | 6,138,000                                | 30.32              | 12.57                   | 6,138                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 198,186        | 28.47                   |
| 1870                 | 13,287,686                                | 7.35                    | 13,778,000                              | 2,820,000  | 43.3                         | 129.961                 | 81,105                             | 20,000,000                          | 634                                       | 1 to 5.9           | 6,324,000                                | 30.32              | 12.57                   | 6,324                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 208,186        | 28.47                   |
| 1871                 | 14,098,756                                | 7.35                    | 14,589,000                              | 2,810,000  | 43.3                         | 137.961                 | 66,105                             | 20,000,000                          | 624                                       | 1 to 5.9           | 6,510,000                                | 30.32              | 12.57                   | 6,510                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 218,186        | 28.47                   |
| 1872                 | 14,909,826                                | 7.35                    | 15,400,000                              | 2,800,000  | 43.3                         | 145.961                 | 51,105                             | 20,000,000                          | 614                                       | 1 to 5.9           | 6,696,000                                | 30.32              | 12.57                   | 6,696                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 228,186        | 28.47                   |
| 1873                 | 15,720,896                                | 7.35                    | 16,211,000                              | 2,790,000  | 43.3                         | 153.961                 | 36,105                             | 20,000,000                          | 604                                       | 1 to 5.9           | 6,882,000                                | 30.32              | 12.57                   | 6,882                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 238,186        | 28.47                   |
| 1874                 | 16,531,966                                | 7.35                    | 17,022,000                              | 2,780,000  | 43.3                         | 161.961                 | 21,105                             | 20,000,000                          | 594                                       | 1 to 5.9           | 7,068,000                                | 30.32              | 12.57                   | 7,068                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 248,186        | 28.47                   |
| 1875                 | 17,343,036                                | 7.35                    | 17,833,000                              | 2,770,000  | 43.3                         | 169.961                 | 6,105                              | 20,000,000                          | 584                                       | 1 to 5.9           | 7,254,000                                | 30.32              | 12.57                   | 7,254                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 258,186        | 28.47                   |
| 1876                 | 18,154,106                                | 7.35                    | 18,644,000                              | 2,760,000  | 43.3                         | 177.961                 | 0,105                              | 20,000,000                          | 574                                       | 1 to 5.9           | 7,440,000                                | 30.32              | 12.57                   | 7,440                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 268,186        | 28.47                   |
| 1877                 | 18,965,176                                | 7.35                    | 19,455,000                              | 2,750,000  | 43.3                         | 185.961                 | 0,105                              | 20,000,000                          | 564                                       | 1 to 5.9           | 7,626,000                                | 30.32              | 12.57                   | 7,626                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 278,186        | 28.47                   |
| 1878                 | 19,776,246                                | 7.35                    | 20,266,000                              | 2,740,000  | 43.3                         | 193.961                 | 0,105                              | 20,000,000                          | 554                                       | 1 to 5.9           | 7,812,000                                | 30.32              | 12.57                   | 7,812                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 288,186        | 28.47                   |
| 1879                 | 20,587,316                                | 7.35                    | 21,077,000                              | 2,730,000  | 43.3                         | 201.961                 | 0,105                              | 20,000,000                          | 544                                       | 1 to 5.9           | 8,000,000                                | 30.32              | 12.57                   | 8,000                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 298,186        | 28.47                   |
| 1880                 | 21,398,386                                | 7.35                    | 21,888,000                              | 2,720,000  | 43.3                         | 209.961                 | 0,105                              | 20,000,000                          | 534                                       | 1 to 5.9           | 8,186,000                                | 30.32              | 12.57                   | 8,186                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 308,186        | 28.47                   |
| 1881                 | 22,209,456                                | 7.35                    | 22,699,000                              | 2,710,000  | 43.3                         | 217.961                 | 0,105                              | 20,000,000                          | 524                                       | 1 to 5.9           | 8,372,000                                | 30.32              | 12.57                   | 8,372                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 318,186        | 28.47                   |
| 1882                 | 23,020,526                                | 7.35                    | 23,510,000                              | 2,700,000  | 43.3                         | 225.961                 | 0,105                              | 20,000,000                          | 514                                       | 1 to 5.9           | 8,558,000                                | 30.32              | 12.57                   | 8,558                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 328,186        | 28.47                   |
| 1883                 | 23,831,596                                | 7.35                    | 24,321,000                              | 2,690,000  | 43.3                         | 233.961                 | 0,105                              | 20,000,000                          | 504                                       | 1 to 5.9           | 8,744,000                                | 30.32              | 12.57                   | 8,744                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 338,186        | 28.47                   |
| 1884                 | 24,642,666                                | 7.35                    | 25,132,000                              | 2,680,000  | 43.3                         | 241.961                 | 0,105                              | 20,000,000                          | 494                                       | 1 to 5.9           | 8,930,000                                | 30.32              | 12.57                   | 8,930                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 348,186        | 28.47                   |
| 1885                 | 25,453,736                                | 7.35                    | 25,943,000                              | 2,670,000  | 43.3                         | 249.961                 | 0,105                              | 20,000,000                          | 484                                       | 1 to 5.9           | 9,116,000                                | 30.32              | 12.57                   | 9,116                  | 12.57                   | 10.91                             | 12.57               | 12.57                 | 12.57                   | 1.57                                   | 358,186        | 28.47                   |
| Average for 27 years |   | 13.80                   |   |  | 10.75                        | 5.38                    |                                    |                                     |   |                    |  | 10.50              |                         | 12.22                  |                         | 18.25                             |                     |                       | 7.07                    |  |                |                         |

The following Estimate for the next Five Years is based on the Result of the past Twenty-Seven Years, as shown above.

| YEAR. | Actual Supply. | Per cent. of In-crease. | Estimated at one Sixth Annual Increase. | Estimated made in 35 Gallons per Inhabitant. | Quantity to each Inhabitant. | Per cent. of In-crease. | Capacity of Works per Mile of Pipe. | Average Quantity for each Tap. | Quantity per year. | Capacity of Works. | Proportion of City to Quantity Supplied. | Amount Collec- ed. | Per cent. of In-crease. | Number of Taps In Use. | Per cent. of In-crease. | No. of Inhabit- ants per Tap. | Miles of Pipe Laid. | Miles of Pipe in Use. | Per cent. of In-crease. | No. of Inhabit- ants per Mile of Pipe. | Total Numbers. | Per cent. of In-crease. |
|-------|----------------|-------------------------|---|--|------------------------------|-------------------------|-------------------------------------|--------------------------------|--------------------|--------------------|--|--------------------|-------------------------|------------------------|-------------------------|-------------------------------|---------------------|-----------------------|-------------------------|--|----------------|-------------------------|
| 1886  | 27,043,800     | 11.5                    | 28,534,000                              | 2,660,000                                    | 43.3                         | 257.961                 | 0,105                               | 697                            | 14,08              | 20,000,000         | 1 to 5.9                                 | 9,302,000          | 17.7                    | 9,302                  | 17.7                    | 10.91                         | 17.7                | 17.7                  | 17.7                    | 1.57                                   | 368,186        | 28.47                   |
| 1887  | 27,854,870     | 11.5                    | 29,345,000                              | 2,650,000                                    | 43.3                         | 265.961                 | 0,105                               | 697                            | 13,35              | 20,000,000         | 1 to 5.9                                 | 9,488,000          | 17.7                    | 9,488                  | 17.7                    | 10.91                         | 17.7                | 17.7                  | 17.7                    | 1.57                                   | 378,186        | 28.47                   |
| 1888  | 28,665,940     | 11.5                    | 30,156,000                              | 2,640,000                                    | 43.3                         | 273.961                 | 0,105                               | 697                            | 12,62              | 20,000,000         | 1 to 5.9                                 | 9,674,000          | 17.7                    | 9,674                  | 17.7                    | 10.91                         | 17.7                | 17.7                  | 17.7                    | 1.57                                   | 388,186        | 28.47                   |
| 1889  | 29,477,010     | 11.5                    | 30,967,000                              | 2,630,000                                    | 43.3                         | 281.961                 | 0,105                               | 697                            | 11,89              | 20,000,000         | 1 to 5.9                                 | 9,860,000          | 17.7                    | 9,860                  | 17.7                    | 10.91                         | 17.7                | 17.7                  | 17.7                    | 1.57                                   | 398,186        | 28.47                   |
| 1890  | 30,288,080     | 11.5                    | 31,778,000                              | 2,620,000                                    | 43.3                         | 289.961                 | 0,105                               | 697                            | 11,16              | 20,000,000         | 1 to 5.9                                 | 10,046,000         | 17.7                    | 10,046                 | 17.7                    | 10.91                         | 17.7                | 17.7                  | 17.7                    | 1.57                                   | 408,186        | 28.47                   |

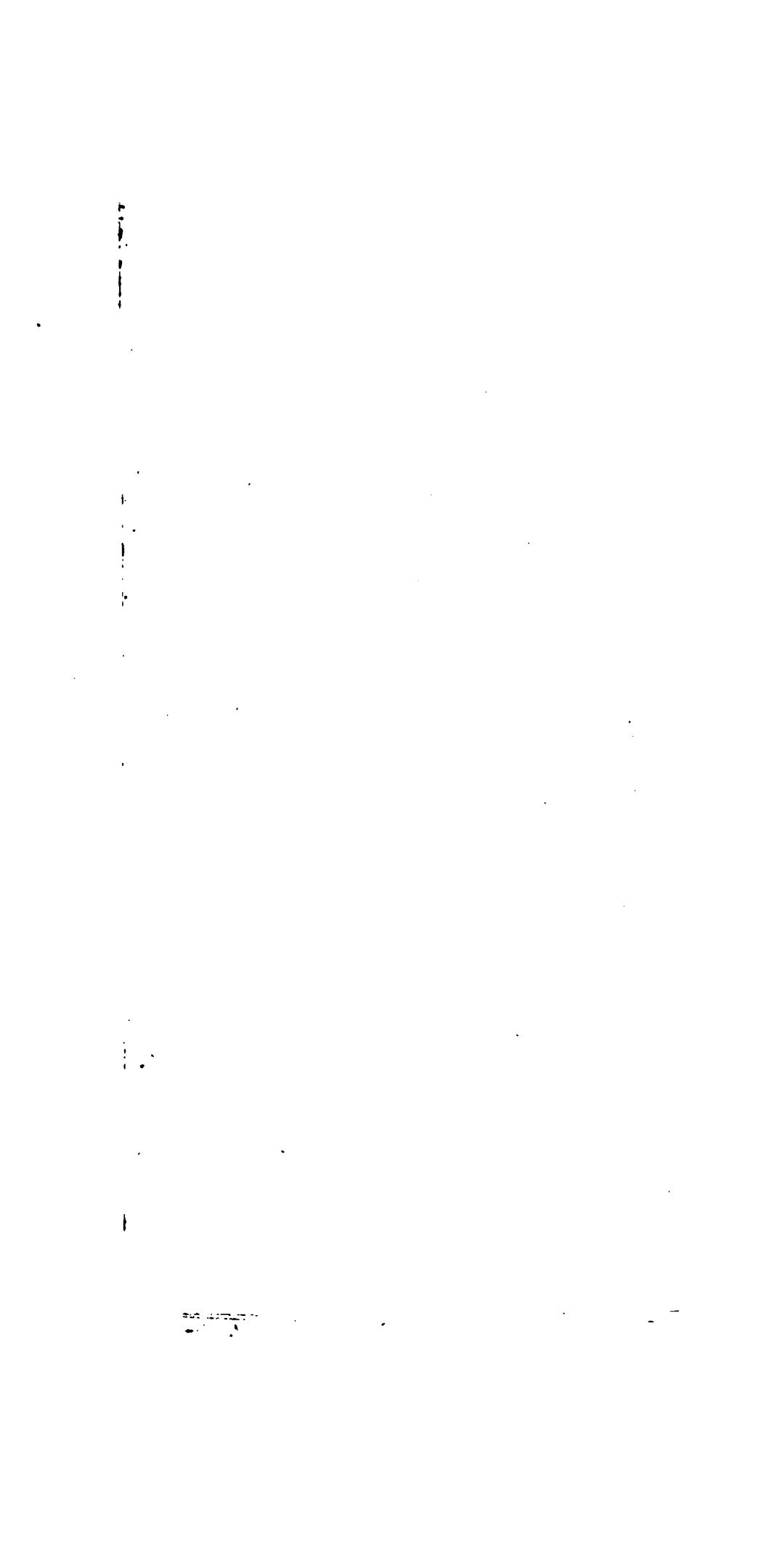
† Estimated upon the increase from 1883 to 1878.

‡ Municipal year changed from April 1st to January 1st. The items are for nine months only.

§ Added 6,150, the average from 1880 to 1885.

¶ Decrease.

The following diagram gives a graphical illustration of the daily quantity pumped at each Works, and also of both Works combined, with a daily record of the temperature, which shows the influence of the weather upon the quantity of water used in the city:





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TILDEN FOUNDATIONS.

## RAIN FALL FOR YEAR 1885.

FROM DATA FURNISHED BY OFFICER OF SIGNAL SERVICE.

| Days of the Month. | January. | February. | March. | April. | May.  | June. | July. | August. | September. | October. | November. | December. |
|--------------------|----------|-----------|--------|--------|-------|-------|-------|---------|------------|----------|-----------|-----------|
| 1...               |          | *         | *      |        | 0.02  |       |       |         |            | *        | 0.30      | 0.05      |
| 2...               |          | *         |        |        |       | 0.54  |       | 5.63    |            | 0.15     | 0.01      | *         |
| 3...               |          |           |        |        | 0.11  | 2.90  |       | 0.73    |            | 0.13     | *         |           |
| 4...               |          | 0.02      |        |        |       | 0.21  | 0.03  |         | 0.09       | *        | 0.20      | 0.17      |
| 5...               | 0.38     | 0.04      |        |        | 0.61  | 0.03  | 0.07  |         | 0.01       | 0.16     | 0.92      | 0.01      |
| 6...               | 0.89     | 0.01      | 0.17   |        | 0.01  |       | 0.06  | 0.36    | *          | *        | 0.33      | 0.03      |
| 7...               |          | 0.37      | 0.03   | 0.08   |       | 0.16  | 0.14  | 0.01    | 0.01       | 0.21     | 0.02      |           |
| 8...               |          | 0.15      |        |        | 0.03  | 0.04  | *     | 0.20    | 1.65       |          |           | 1.21      |
| 9...               |          | 0.84      |        |        | 0.02  |       | 0.83  | 0.02    | 0.25       | *        |           | 0.57      |
| 10...              |          |           |        | 0.14   |       |       |       |         | *          | *        | *         | 0.03      |
| 11...              | 0.27     | 0.04      |        | 0.07   |       |       |       |         |            | *        | *         | *         |
| 12...              | 0.06     | 0.02      |        | 0.06   | 0.08  |       |       | 0.01    | 0.01       | *        | *         | 0.24      |
| 13...              |          |           | *      | 0.01   |       | 0.02  | 0.18  |         | 0.31       | 0.62     | 0.01      | 0.61      |
| 14...              | 0.33     | *         | 0.02   | 0.25   |       | *     | 0.09  |         |            | 0.01     |           | 0.03      |
| 15...              | 0.16     | 0.47      |        | 0.24   |       | 0.15  |       |         |            |          | *         | *         |
| 16...              | 0.56     |           |        | 0.42   |       |       |       |         |            |          | *         | *         |
| 17...              | 0.04     | 0.03      | 0.17   | 1.71   | 0.15  |       |       |         |            |          | 0.02      | *         |
| 18...              |          |           |        | 0.02   | *     |       |       | *       |            | 0.01     | 0.05      | *         |
| 19...              |          |           | 0.01   |        |       | *     |       |         | 0.62       | 2.22     | 0.11      |           |
| 20...              |          |           | 0.03   |        |       | 0.59  |       | *       | *          | 0.01     | *         |           |
| 21...              |          | *         |        |        |       | 0.40  | 0.04  | 0.23    |            |          | *         |           |
| 22...              |          |           | *      | *      | *     | *     | *     |         |            |          | *         |           |
| 23...              | 0.39     |           |        | 0.27   |       |       | 0.39  | 1.92    |            |          | 0.30      | 0.09      |
| 24...              | 0.01     |           | 0.02   | 0.01   | 0.22  |       |       | 2.00    |            |          | 0.06      | 0.01      |
| 25...              |          |           |        | 0.21   | *     |       | 0.05  | 0.01    |            |          | *         | 0.02      |
| 26...              |          | 0.02      |        | 0.07   |       |       |       |         |            |          | *         |           |
| 27...              | 0.09     |           |        |        |       | 0.16  |       |         |            | *        | *         |           |
| 28...              |          |           | *      | 0.01   |       |       | 0.01  |         |            | *        | *         | *         |
| 29...              | *        |           | *      | *      | 1.23  |       | 0.54  | 0.15    | *          | *        | *         | 0.15      |
| 30...              |          |           | 0.12   | 0.43   | 0.69  |       | 0.01  | 0.01    | 0.02       | 0.01     | *         | 0.13      |
| 31...              |          |           |        |        |       |       |       |         |            | 0.34     |           |           |
| Total              | 3.18     | 2.01      | 0.57   | 4.00   | 3.17  | 5.20  | 2.44  | 11.28   | 2.97       | 3.87     | 2.33      | 3.35      |
| Average            | 0.103    | .072      | 0.018  | 0.133  | 0.102 | 0.173 | 0.79  | 0.364   | 0.099      | 0.125    | 0.078     | 0.108     |

Total rain fall for the year, 44.37 inches.

NOTE.—\*Too small to measure.

190893

## MEAN TEMPERATURE FOR YEAR 1885.

FROM DATA FURNISHED BY OFFICER OF SIGNAL SERVICE.

| DAYS OF<br>THE<br>MONTH. | January. | February. | March. | April. | May. | June. | July. | August. | September. | October. | November. | December. |
|--------------------------|----------|-----------|--------|--------|------|-------|-------|---------|------------|----------|-----------|-----------|
| 1                        | 6.8      | 16.9      | 34.0   | 41.8   | 40.9 | 57.8  | 65.2  | 75.2    | 57.1       | 62.6     | 38.0      | 42.6      |
| 2                        | 10.7     | 26.4      | 33.9   | 41.2   | 40.3 | 67.4  | 66.5  | 67.2    | 61.2       | 65.8     | 38.6      | 38.7      |
| 3                        | 26.9     | 34.8      | 38.1   | 32.8   | 46.7 | 60.4  | 66.3  | 69.9    | 60.6       | 50.5     | 41.0      | 37.3      |
| 4                        | 32.9     | 34.8      | 36.7   | 40.1   | 51.5 | 63.2  | 71.2  | 70.4    | 58.1       | 44.3     | 48.1      | 34.6      |
| 5                        | 40.4     | 17.8      | 34.9   | 50.7   | 54.6 | 53.3  | 75.7  | 68.8    | 56.5       | 45.2     | 46.4      | 18.2      |
| 6                        | 38.7     | 22.6      | 36.0   | 49.2   | 43.2 | 69.5  | 75.4  | 70.0    | 55.2       | 45.5     | 57.6      | 11.1      |
| 7                        | 33.5     | 27.1      | 24.1   | 54.1   | 39.8 | 74.8  | 75.4  | 71.3    | 60.3       | 46.5     | 47.7      | 9.5       |
| 8                        | 42.4     | 19.8      | 25.7   | 32.3   | 42.7 | 47.5  | 80.7  | 75.0    | 64.5       | 46.0     | 41.9      | 39.5      |
| 9                        | 32.9     | 15.0      | 36.8   | 37.3   | 42.5 | 56.6  | 72.7  | 71.4    | 57.7       | 51.9     | 38.9      | 31.2      |
| 10                       | 32.4     | -10.7     | 23.4   | 43.3   | 44.3 | 61.1  | 62.4  | 68.4    | 58.1       | 58.0     | 45.2      | 17.0      |
| 11                       | 39.7     | 4.4       | 34.8   | 42.5   | 44.2 | 68.1  | 62.6  | 70.2    | 64.5       | 58.8     | 57.0      | 13.9      |
| 12                       | 17.5     | 0.4       | 31.0   | 34.9   | 53.4 | 73.3  | 70.3  | 77.1    | 70.7       | 59.6     | 49.6      | 25.5      |
| 13                       | 6.6      | 2.5       | 34.8   | 31.7   | 54.6 | 76.4  | 69.5  | 71.7    | 68.5       | 54.9     | 34.4      | 29.0      |
| 14                       | 20.2     | 20.3      | 39.9   | 38.9   | 60.6 | 75.1  | 71.4  | 59.7    | 67.4       | 51.9     | 31.0      | 14.5      |
| 15                       | 26.0     | 15.4      | 25.9   | 44.4   | 66.8 | 73.9  | 67.9  | 61.7    | 64.8       | 53.9     | 32.9      | 22.2      |
| 16                       | 20.6     | -5.4      | 13.0   | 40.7   | 70.6 | 61.3  | 79.4  | 65.7    | 60.8       | 57.4     | 40.8      | 32.2      |
| 17                       | 4.5      | 3.6       | 16.5   | 39.6   | 69.4 | 66.0  | 66.9  | 72.6    | 67.9       | 55.8     | 50.9      | 33.1      |
| 18                       | -3.4     | 5.9       | 24.5   | 42.6   | 48.5 | 70.6  | 65.7  | 75.5    | 67.5       | 51.8     | 50.0      | 33.8      |
| 19                       | -5.0     | 1.4       | 16.1   | 48.8   | 42.2 | 73.3  | 74.3  | 66.9    | 70.1       | 47.1     | 41.3      | 27.0      |
| 20                       | 5.6      | 2.9       | 10.0   | 64.8   | 47.6 | 70.1  | 84.7  | 71.6    | 71.0       | 40.8     | 40.8      | 31.3      |
| 21                       | -3.4     | 10.3      | 12.9   | 68.9   | 51.7 | 65.5  | 74.3  | 73.4    | 72.9       | 43.4     | 39.8      | 39.9      |
| 22                       | 2.2      | 14.2      | 17.1   | 67.4   | 52.6 | 54.7  | 73.8  | 67.8    | 59.4       | 48.2     | 35.9      | 45.4      |
| 23                       | 23.5     | 18.5      | 28.3   | 50.6   | 55.4 | 60.6  | 76.6  | 72.0    | 54.5       | 47.3     | 38.9      | 43.7      |
| 24                       | 27.2     | 28.1      | 33.6   | 41.9   | 64.0 | 64.1  | 78.5  | 65.0    | 62.6       | 52.5     | 37.5      | 37.2      |
| 25                       | 12.2     | 32.2      | 32.8   | 45.7   | 65.3 | 72.2  | 71.8  | 59.3    | 68.7       | 55.8     | 36.6      | 33.3      |
| 26                       | -0.1     | 35.1      | 45.7   | 50.5   | 65.0 | 75.4  | 71.7  | 58.1    | 69.8       | 55.7     | 36.0      | 32.8      |
| 27                       | 6.4      | 35.7      | 35.4   | 47.6   | 52.8 | 74.4  | 73.7  | 61.1    | 67.6       | 49.8     | 37.8      | 34.9      |
| 28                       | -4.7     | 38.8      | 33.2   | 41.4   | 54.8 | 63.1  | 79.1  | 63.3    | 68.0       | 51.0     | 40.9      | 39.2      |
| 29                       | 16.3     | .....     | 32.6   | 51.0   | 52.3 | 54.7  | 78.8  | 62.4    | 66.6       | 44.0     | 41.1      | 44.2      |
| 30                       | 27.7     | .....     | 42.1   | 44.5   | 56.0 | 58.0  | 77.4  | 64.2    | 65.0       | 40.4     | 40.3      | 42.4      |
| 31                       | 31.1     | .....     | 47.0   | .....  | 63.1 | ..... | 76.3  | 63.0    | .....      | 44.1     | .....     | 36.5      |
| Averages                 | 18.3     | 16.8      | 30.0   | 45.4   | 52.8 | 65.4  | 72.8  | 68.1    | 63.9       | 51.0     | 41.9      | 31.2      |



## NORTH PUMPING WORKS.

CHICAGO, Jan. 19, 1886.

S. G. ARTINGSTALL,

*City Engineer.*

SIR: I herewith submit the Thirty-third Annual Report of the operations of these Works, the same being for the year ending December 31st, 1885.

The total quantity of water pumped, with an allowance of  $5\frac{2}{3}$  per cent. for loss of action in pumps, is 14,004,733,925 gallons, being  $9\frac{9}{100}$  per cent. decrease of the quantity pumped during the year 1884. The daily average was nearly  $38\frac{4}{5}$  million gallons—a little over  $3\frac{1}{10}$  millions less than in 1884.

The greatest daily average pumped for a single month was in December—nearly  $43\frac{1}{10}$  million gallons. The least daily average for a like period was during May—nearly  $33\frac{1}{10}$  million gallons.

The largest quantity pumped for a single day was on the 7th of December—54,350,415 gallons. The least quantity pumped for a single day was on the 10th of May—28,995,430 gallons.

The following tabulated record exhibits in detail the operations of these Works for the year 1885:



# OPERATIONS OF ENGINES AND BOILERS.

| MONTHS.<br>1885.                  | No. of Days. | No. of Hours run per<br>Month. | Average Number of<br>Hours run per day. | Total Revolutions<br>per Month. | Average No. of Rev-<br>olutions per day. | Total No. of Gallons<br>of Water pumped<br>per month, less 5%<br>of action. | Average No. of Gallons<br>of Water pumped<br>per day less 5% per<br>cent. for loss of<br>action. | Pounds of Coal con-<br>sumed per Month<br>for Pumping. | Average No. of Pounds<br>of Coal consumed<br>per day for pump-<br>ing. | Pounds of Coal con-<br>sumed per Month<br>for ch'g'g Boilers | Total Pounds of Coal<br>consumed per<br>Month. | Average head against<br>Pumps in feet. | DUTY. |
|-----------------------------------|--------------|--------------------------------|---|---------------------------------|--|---|--|--|--|--|--|--|-------|
|                                   |              |                                |   |                                 |  |   |  |  |  |  |  |  |       |
| January.....                      | 31           | 744.00                         | 801.178                                 | 25.843                          | 1,183,792,300                            | 38,186,843  | 2,184,630  | 70,472   | 3,000  | 2,187,630  | 112.0  | 50,102,500                             |       |
| February.....                     | 28           | 672.00                         | 789,233                                 | 28,187                          | 1,172,952,080                            | 41,891,145  | 2,269,570  | 81,055   | 6,400  | 2,275,970  | 111.8  | 47,198,400                             |       |
| March.....                        | 31           | 744.00                         | 704,438                                 | 22,723                          | 1,179,418,925                            | 38,045,772  | 2,205,550  | 71,147   | 6,400  | 2,211,950  | 114.1  | 50,886,400                             |       |
| April.....                        | 30           | 720.00                         | 660,608                                 | 22,020                          | 1,082,368,455                            | 36,078,948  | 2,008,980  | 66,965   | 3,000  | 2,011,960  | 114.1  | 51,269,000                             |       |
| May.....                          | 31           | 744.00                         | 610,720                                 | 19,700                          | 1,044,409,125                            | 33,690,617  | 1,931,700  | 62,813   | 6,300  | 1,938,000  | 113.6  | 51,224,000                             |       |
| June.....                         | 30           | 720.00                         | 651,250                                 | 21,708                          | 1,095,438,595                            | 36,514,620  | 1,994,760  | 66,492   | 8,200  | 1,997,960  | 109.5  | 50,150,600                             |       |
| July.....                         | 31           | 744.00                         | 760,051                                 | 24,518                          | 1,207,702,805                            | 38,958,155  | 2,109,680  | 68,054   | 7,200  | 2,116,880  | 110.4  | 52,708,000                             |       |
| August.....                       | 31           | 744.00                         | 805,468                                 | 25,983                          | 1,232,961,195                            | 39,450,361  | 2,231,770  | 71,892   | 3,000  | 2,234,770  | 114.2  | 52,190,600                             |       |
| September.....                    | 30           | 720.00                         | 770,031                                 | 25,668                          | 1,170,082,285                            | 39,002,742  | 2,130,890  | 71,080   | 9,200  | 2,140,090  | 114.0  | 52,206,600                             |       |
| October.....                      | 31           | 744.00                         | 802,704                                 | 25,894                          | 1,208,596,170                            | 38,986,973  | 2,284,460  | 73,692   | 2,800  | 2,287,260  | 115.2  | 50,829,400                             |       |
| November.....                     | 30           | 720.00                         | 712,902                                 | 23,763                          | 1,101,196,590                            | 36,706,553  | 2,088,510  | 69,617   | 4,500  | 2,093,010  | 114.5  | 50,350,000                             |       |
| December.....                     | 31           | 744.00                         | 982,079                                 | 31,670                          | 1,335,815,400                            | 43,090,820  | 2,500,710  | 80,668   | 2,900  | 2,503,610  | 112.5  | 50,118,800                             |       |
| Totals.....                       | 365          | 8,760.00                       | 9,050,652                               | .....                           | 14,004,733,925                           | .....   | 25,941,190   | .....  | 57,900   | 25,999,090   | .....  | .....                                  |       |
| General Average<br>per month..... | .....        | 730.00                         | 754,221                                 | .....                           | 1,167,061,160                            | .....   | 2,161,766  | .....  | 4,825  | 2,166,591  | .....  | .....                                  |       |
| General Average<br>per day.....   | .....        | 24.00                          | .....                                   | 24,796                          | .....                                    | .....   | .....  | 71,072   | .....  | 71,230   | 113.0  | 50,878,000                             |       |

NOTE.—Coal for heating building and pumping out wells included in above amount.

The annexed table sets forth the total quantity of water pumped, and the time run by the several engines, respectively:

| Engines<br>Designated<br>as | No. of<br>Hours Run. |    | Total<br>Revolutions. | Total Gallons of<br>Water Pumped, less<br>5½ per cent. for loss<br>of action. |
|-----------------------------|----------------------|----|-----------------------|---|
|                             | H.                   | M. |                       |   |
| 1853                        | 592                  | 55 | 357,861               | 175,351,890   |
| 1857                        | 1,338                | 35 | 814,515               | 627,176,550   |
| 1867                        | 5,367                | 35 | 3,462,953             | 3,289,805,350   |
| 1872                        | 8,681                | 35 | 4,415,323             | 9,912,400,135   |
| Totals .....                | 15,980               | 40 | 9,050,652             | 14,004,733,925  |

The south or "72" engines, with the exception of two stops for packing, have been in continuous operation since the 4th of January—a period of 361 days. The longest run made by this engine was from May 6th, 1883, to November 25th, 1884, a period of 570 days, lacking a few days of being nineteen months, with but three stops for packing. The first part of this run, from May 6th, 1883, to May 31st, 1884, a period of 392 days, or thirteen months, was made without a stoppage for any purpose whatever.

## FUEL.

Coal has been received and used as follows:

## LACKAWANNA COAL.

|  | Tons.  | Pounds. | Tons.  | Pounds. |
|--|--------|---------|--------|---------|
| On hand January 1, 1885.                         |        |         | 721    | 1,710   |
| Received of large egg<br>coal.....               |        |         | 12,676 | 990     |
| Received of pea coal....                         |        |         | 637    | 1,820   |
| “ “ coke.....                                    |        |         | 22     | 1,110   |
| Used for pumping, heat-<br>ing building, etc.... | 12,970 | 1,190   |        |         |
| Used for Work Shop...                            | 204    | 1,100   |        |         |
| On hand January 1, 1886.                         | 883    | 1,340   |        |         |
| Total.....                                       | 14,058 | 1,630   | 14,058 | 1,630   |

## LAUREL HILL.

|  | Tons. | Pounds. | Tons. | Pounds. |
|--|-------|---------|-------|---------|
| On hand January 1, 1885.                 |       |         | 4     | .....   |
| Received.....                            |       |         | 84    | 1,950   |
| Used for changing boilers.               | 28    | 1,900   |       |         |
| “ Work Shop, pipe<br>extension, etc..... | 57    | 1,170   |       |         |
| On hand January 1, 1886.                 | 2     | 880     |       |         |
| Total.....                               | 88    | 1,950   | 88    | 1,950   |



## EXPENSES DUE TO PUMPING.

|  |                     |
|--|---------------------|
| Salaries of engineers.....   | \$ 7,300 00         |
| Labor, firemen, etc.....   | 17,350 97           |
| 12,970 $\frac{190}{1000}$ tons of Lackawanna coal at<br>an average cost of \$5.58 per ton... | 72,419 48           |
| 161 gallons of lard oil.....   | 122 99              |
| 582 $\frac{1}{4}$ gallons of cylinder oil.....   | 582 25              |
| 621 pounds of solidified oil.....  | 156 25              |
| 117 pounds of tallow.....  | 9 36                |
| 132 pounds of packing.....   | 38 87               |
| 1,521 pounds of waste.....   | 138 09              |
| Small stores.....  | 92 38               |
| Gas for lighting Works.....  | 962 40              |
| Repairs of fire room tools.....  | 63 93               |
| Repairs of engines.....  | 284 51              |
| Repairs of boilers.....  | 883 40              |
| Total.....   | <u>\$100,404 88</u> |

|  |                         |
|--|-------------------------|
| Cost of delivering water per million gallons.                      | \$7 16 $\frac{93}{100}$ |
| Cost of delivering water per million gallons<br>one foot high..... | 06 $\frac{34}{100}$     |
| Cost of repairs of engines and boilers.....                        | 08 $\frac{69}{100}$     |

Distributed as follows:

|                 |                     |
|-----------------|---------------------|
| To engines..... | 02 $\frac{31}{100}$ |
| To boilers..... | 06 $\frac{31}{100}$ |



The following is the cost of delivering water per million gallons during the past ten years, and cost of coal:

|                                  | Average Cost of<br>Coal per Ton. | Cost of<br>Pumping. |
|----------------------------------|----------------------------------|---------------------|
| 1876.....                        | \$7 15                           | \$9 56              |
| 1877.....                        | 5 38                             | 7 09                |
| 1878 (Estimated Screenings used) | 4 39                             | 6 24                |
| 1879.....                        | 4 14                             | 5 65                |
| 1880.....                        | 4 83                             | 5 68                |
| 1881.....                        | 6 18                             | 7 12                |
| 1882.....                        | 6 16                             | 7 34                |
| 1883.....                        | 5 78                             | 7 27                |
| 1884.....                        | 5 91                             | 7 71                |
| 1885.....                        | 5 58                             | 7 17                |
|                                  | <u>\$5 55</u>                    | <u>\$7 08</u>       |

The quantity of water pumped, head, cost of coal and repairs, cost of coal per ton and total cost per million, for the past ten years, is shown in the following table:

| YEAR.           | Galls. Pumped. | Head.  | Cost of Repairs<br>of Engines &<br>Boilers. | Cost of Repairs<br>per Million<br>Gallons. | Cost of Coal per<br>Ton. | Total Cost of<br>Pumping one<br>Million Galls. | Cost of Pump-<br>ing one Mill.<br>Gallons 1 ft.<br>high. |
|-----------------|----------------|--------|---|--|--------------------------|--|--|
| 1875 (9 months) | 10,957,252,996 | 105.   | 1,611 86                                    | 0 14 $\frac{7}{100}$                       | 7 92                     | 10 81 $\frac{8}{100}$                          | 0 10 $\frac{3}{100}$                                     |
| 1876. ....      | 14,525,858,798 | 113.   | 2,470 30                                    | 0 17                                       | 7 15                     | 9 56 $\frac{1}{100}$                           | 0 08 $\frac{4}{100}$                                     |
| 1877. ....      | 11,958,977,636 | 110.   | 2,734 99                                    | 0 22 $\frac{87}{100}$                      | 5 38                     | 7 09 $\frac{64}{100}$                          | 0 06 $\frac{45}{100}$                                    |
| 1878. ....      | 11,145,370,232 | 106.   | 1,801 42                                    | 0 16 $\frac{15}{100}$                      | 4 39                     | 6 24 $\frac{24}{100}$                          | 0 05 $\frac{88}{100}$                                    |
| 1879. ....      | 11,153,103,981 | 102.08 | 714 04                                      | 0 09 $\frac{47}{100}$                      | 4 14                     | 5 65 $\frac{55}{100}$                          | 0 05 $\frac{54}{100}$                                    |
| 1880. ....      | 12,354,008,905 | 104.07 | 1,208 67                                    | 0 09 $\frac{78}{100}$                      | 4 83                     | 5 67 $\frac{82}{100}$                          | 0 05 $\frac{42}{100}$                                    |
| 1881. ....      | 13,758,940,879 | 105.78 | 2,200 07                                    | 0 16                                       | 6 18                     | 7 12 $\frac{28}{100}$                          | 0 06 $\frac{73}{100}$                                    |
| 1882. ....      | 14,150,193,884 | 105.38 | 696 68                                      | 0 04 $\frac{92}{100}$                      | 6 16                     | 7 34 $\frac{8}{100}$                           | 0 06 $\frac{98}{100}$                                    |
| 1883. ....      | 16,365,263,090 | 107.4  | 1,388 71                                    | 0 09 $\frac{10}{100}$                      | 5 78                     | 7 26 $\frac{88}{100}$                          | 0 06 $\frac{78}{100}$                                    |
| 1884. ....      | 14,505,650,785 | 107.2  | 4,002 81                                    | 0 26 $\frac{73}{100}$                      | 5 91                     | 7 71 $\frac{7}{100}$                           | 0 07 $\frac{19}{100}$                                    |
| 1885. ....      | 14,004,733,925 | 113.0  | 1,206 78                                    | 0 08 $\frac{92}{100}$                      | 5 58                     | 7 16 $\frac{23}{100}$                          | 0 06 $\frac{24}{100}$                                    |

TABLE SHOWING QUANTITY OF WATER PUMPED AT THE "NORTH PUMPING WORKS" EACH MONTH DURING PAST TEN YEARS.

| MONTH.          | 1876.          | 1877.          | 1878.          | 1879.          | 1880.          | 1881.          | 1882.          | 1883.          | 1884.          | 1885.          |
|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| January .....   | 1,208,668,563  | 719,462,385    | 898,314,968    | 1,128,741,694  | 987,419,633    | 1,160,312,094  | 1,060,553,403  | 1,450,650,870  | 1,697,746,065  | 1,183,702,300  |
| February .....  | 1,169,388,859  | 774,594,448    | 815,598,987    | 983,647,626    | 908,653,592    | 1,071,244,080  | 984,356,947    | 1,387,274,940  | 1,400,084,000  | 1,175,962,080  |
| March .....     | 1,244,271,298  | 1,088,521,780  | 900,047,019    | 1,083,257,148  | 973,890,272    | 1,084,122,601  | 1,126,205,744  | 1,300,238,480  | 1,461,838,615  | 1,170,418,923  |
| April .....     | 1,199,825,593  | 1,109,003,315  | 586,000,942    | 677,241,146    | 974,305,639    | 1,005,401,896  | 1,010,929,508  | 1,304,018,690  | 1,343,150,000  | 1,082,368,455  |
| May .....       | 1,306,577,131  | 1,154,372,813  | 639,630,064    | 781,082,231    | 1,060,443,267  | 982,316,027    | 1,145,043,237  | 1,226,970,205  | 1,353,181,439  | 1,044,406,125  |
| June .....      | 1,237,317,437  | 1,110,570,865  | 724,020,984    | 755,459,026    | 1,086,446,318  | 1,057,288,288  | 1,231,069,204  | 1,279,000,075  | 1,354,354,220  | 1,065,438,595  |
| July .....      | 1,358,782,909  | 1,115,230,814  | 1,114,216,563  | 1,040,316,119  | 1,122,556,346  | 1,272,257,588  | 1,303,469,202  | 1,414,407,680  | 1,400,897,800  | 1,237,702,809  |
| August .....    | 1,376,689,544  | 1,066,176,419  | 1,122,492,614  | 1,009,289,439  | 1,089,773,864  | 1,339,158,906  | 1,314,724,931  | 1,435,126,930  | 1,231,432,525  | 1,222,901,106  |
| September ..... | 1,243,745,590  | 1,012,625,066  | 1,050,831,650  | 989,337,876    | 1,080,685,710  | 1,236,347,152  | 1,300,667,799  | 1,307,348,100  | 1,228,254,905  | 1,170,082,285  |
| October .....   | 1,268,071,944  | 998,713,776    | 1,064,588,733  | 1,047,124,368  | 1,038,425,722  | 1,314,346,901  | 2,230,715,910  | 1,294,425,370  | 1,147,392,310  | 1,208,506,170  |
| November .....  | 1,015,351,277  | 909,774,581    | 1,145,355,798  | 780,223,037    | 982,229,141    | 1,227,120,714  | 1,156,589,563  | 1,330,954,546  | 1,942,216,985  | 1,101,190,500  |
| December .....  | 899,709,283    | 899,607,884    | 1,073,271,910  | 794,384,281    | 1,065,585,401  | 966,525,302    | 1,283,878,346  | 1,432,341,210  | 966,175,820    | 1,335,815,400  |
| Totals .....    | 14,625,858,706 | 11,958,977,646 | 11,145,370,232 | 11,153,102,931 | 12,354,006,905 | 13,758,940,879 | 14,150,103,884 | 16,365,393,090 | 15,403,650,785 | 14,004,733,925 |

The following is a statement of the work done at the Machine Shops on the premises of the North Pumping Works:

Hydrants, stop-valves, etc., have been manufactured during the year as follows:

#### NEW HYDRANTS.

|  |       |
|--|-------|
| Four inch (Double nozzle).....           | 11    |
| Two and a half inch (Double nozzle)..... | 361   |
| “ “ “ (Single nozzle).....               | 78    |
|  | <hr/> |
| Total manufactured.....                  | 450   |
| Of this number there have been used..... | 426   |
|  | <hr/> |
| Leaving on hand January 1, 1886.....     | 24    |

Of the following sizes, viz.:

|  |             |
|--|-------------|
| Two and a half inch (Double nozzle)..... | 14          |
| “ “ “ (Single nozzle).....               | 10          |
|  | <hr/>       |
| Total.....                               | 24          |
|  | <hr/> <hr/> |



## NEW STOP VALVES.

|  |             |
|--|-------------|
| Four inch.....                           | 60          |
| Six inch.....                            | 130         |
| Eight inch.....                          | 58          |
| Twelve inch.....                         | 17          |
| Sixteen inch.....                        | 9           |
| Twenty-four inch.....                    | 7           |
|  | <hr/>       |
| Total manufactured.....                  | 281         |
|  | <hr/>       |
| Of this number there have been used..... | 245         |
|  | <hr/>       |
| Leaving on hand January 1, 1886.....     | 36          |
|  | <hr/> <hr/> |

Of the following sizes, viz.:

|                       |             |
|-----------------------|-------------|
| Four inch.....        | 2           |
| Six inch.....         | 12          |
| Eight inch.....       | 12          |
| Twelve inch.....      | 4           |
| Sixteen inch.....     | 3           |
| Twenty-four inch..... | 3           |
|                       | <hr/>       |
| Total.....            | 36          |
|                       | <hr/> <hr/> |

The above list includes the hydrants and stop valves reported on hand January 1, 1885, which were carried over as "stock" on hand.

In addition to the foregoing work, a number of hydrants and stop valves have been repaired, and the usual amount of repairing has been done for the various departments of the city.

The total expenditure for labor and material on account of shop, including value of stock on hand January 1, 1886, is \$35,416 38

Charged to the following accounts, viz.:

|   |             |
|---|-------------|
| Water Department (Pumping) .....            | \$ 3,061 47 |
| Water Department (other than pumping) ..... | 1,017 66    |
| New hydrants and stop valves .....          | 20,012 43   |
| Pipe extension .....                        | 379 29      |
| Tappers' tools .....                        | 202 86      |
| Meter Department .....                      | 1,695 64    |
| Street " .....                              | 623 42      |
| Fullerton Avenue Pumping Works .....        | 23 01       |
| Bridge Department .....                     | 18 37       |
| City Hall Building .....                    | 48 21       |
| Engineer's office .....                     | 33 27       |
| Ogden Ditch dam .....                       | 29 30       |
| Carried forward .....                       | \$27,145 93 |

|  |                    |                    |
|--|--------------------|--------------------|
| Brought forward.....   | \$27,145 93        |                    |
| Fire Department (Coal, half<br>of expenses firing, and<br>repairs of engines and<br>boilers) ..... | 822 15             |                    |
| Expenses running shop (coal,<br>gas, etc.) .....   | 2,645 62           |                    |
| Stock on hand January 1,<br>1886.....  | 4,803 68           |                    |
| Total.....   | <u>\$35,416 38</u> | <u>\$35,416 38</u> |

|  |                    |                    |
|--|--------------------|--------------------|
| The value of work done in<br>the shop, estimating<br>the same at less than<br>current prices for like<br>articles, is..... |                    | \$43,998 92        |
| Add coal, etc., Fire Depart-<br>ment.....  |                    | 822 15             |
| Deduct as shown.....   | \$35,416 38        |                    |
| Deduct 10 per cent. for in-<br>terest and depreciation<br>of tools, etc., costing<br>\$10,337 47.....                      | 1,033 71           |                    |
| Leaving nominal net earn-<br>ings of shop.....   | 8,370 98           |                    |
| Total.....   | <u>\$44,821 07</u> | <u>\$44,821 07</u> |
| Cost of tools previously reported.....   | \$10,130 09        |                    |
| Add by repairs past year.....  | 207 38             |                    |
| Present value of tools.....  |                    | <u>\$10,337 47</u> |

|  |                    |
|--|--------------------|
| Value of stop-valves and hydrants, before<br>noted as on hand January 1, 1886, to-<br>gether with the raw material in the<br>shop, is..... | \$4,803 68         |
| Total value of stock and tools.....  | <u>\$15,141 15</u> |

In January last commenced testing feed water heater, placed in the south fire room last year, resulting in an increase of the temperature from 110 to 160 degrees, and at the present time gives good satisfaction.

In March placed tanks and pump in north fire room for the purpose of testing coal.

Last summer the breakwater at the foot of Pearson street had become so broken and destroyed by the heavy storms that I put it in thorough repair and built a railing around the top to guard against accidents.

The breakwater at east end of lot, and the shore inlet I also repaired, but they will need to be rebuilt entirely anew.

The stone covering to some of the tunnel shafts should be renewed, as they are fast crumbling to pieces.

F. TRAUTMANN,

*Engineer.*



## WEST PUMPING WORKS.

CHICAGO, February 6, 1886.

SAMUEL G. ARTINGSTALL, Esq.,

*City Engineer.*

SIR: The Tenth Annual Report of the operation of these Works, being for the year ending December 31, 1885, is herewith submitted.

## ENGINES.

The four (4) engines located at these Works have been in continual operation during the year, excepting a few hours at night when the head becomes very high we generally shut down one engine and start it again in the morning. But when we have extreme hot or cold weather we find it necessary to run all four (4) engines day and night to their full capacity. The old or 1876 engines were shut down two weeks alternately during the months of November and December to be overhauled.

A final test was made in April of new engines that were completed in July, 1884, before delivering them to the city. They thoroughly fulfilled the conditions required by contract and far exceeded the stipulated duty.

They have worked in a highly satisfactory manner up to the present time.

### BOILERS.

The boilers are in good condition, and have required but the ordinary repairs during the year. The old boilers have been in constant use for the past ten years, and I believe that in the near future it will be necessary to give them a more extensive overhauling. The use of petroleum oil as fuel was dispensed with after the 1st of February. The contract price of coal being considerably reduced we found that to keep burning the oil would be unprofitable.

The number of gallons of water pumped, head against pumps, coal burned during the year, and duty is shown in the following table:

TABLE NO. 1.  
OPERATIONS OF ENGINES AND BOILERS OF "WEST PUMPING WORKS" IN 1885.

| MONTHS.<br>1885.       | No of Days. | No. of hours<br>run per Mth. | Av. per Day. | Total Revolu-<br>tions per<br>Month. | Average Revo-<br>lutions per<br>Day. | Total Gallons<br>of Water<br>Pumped, less<br>5% per cent.<br>for losses of<br>Action in<br>Pumps. | Average No. of<br>Galls. Pumped<br>per Day, less<br>5% per cent.<br>for losses of<br>Action in<br>Pumps. | Pounds of<br>Coal con-<br>sumed per<br>Month for<br>Pumping. | Av. lbs. of Coal<br>con'd per Day<br>for Pumping. | Pounds of Coal<br>per Mth for<br>Ch'g Boilers. | Total Pounds<br>of Coal con-<br>sumed per<br>Month. | Average Head<br>again t Pump-<br>ing in feet. | Duty.      |
|------------------------|-------------|------------------------------|--------------|--------------------------------------|--------------------------------------|---|--|--|---|--|---|---|------------|
| January.....           | 31          | 744                          | 24           | 1,714,920                            | 55,320                               | 1,764,123,600   | 56,907,913   | 2,072,900  | 66,898  | 4,400  | 2,077,300   | 107.6   | 53,000,000 |
| February.....          | 28          | 672                          | 24           | 1,612,853                            | 53,690                               | 1,658,890,700   | 59,245,025   | 2,688,300  | 96,000  | 20,200   | 2,708,500   | 103.6   | 55,700,000 |
| March.....             | 31          | 744                          | 24           | 1,697,360                            | 54,754                               | 1,748,143,220   | 59,391,720   | 2,702,300  | 87,171  | 4,800  | 2,707,100   | 102.8   | 56,100,000 |
| April.....             | 30          | 720                          | 24           | 1,459,242                            | 48,641                               | 1,498,356,720   | 49,945,224   | 2,407,280  | 80,242  | 5,400  | 2,412,680   | 103.8   | 59,700,000 |
| May.....               | 31          | 744                          | 24           | 1,585,304                            | 51,139                               | 1,632,297,920   | 52,651,868   | 2,561,600  | 82,632  | 3,200  | 2,564,800   | 111.4   | 59,700,000 |
| June.....              | 30          | 720                          | 24           | 1,544,425                            | 51,480                               | 1,595,137,620   | 53,204,587   | 2,468,800  | 82,293  | 9,800  | 2,478,600   | 107.1   | 59,000,000 |
| July.....              | 31          | 744                          | 24           | 1,676,647                            | 54,085                               | 1,729,898,200   | 55,802,910   | 2,598,300  | 83,429  | 13,000   | 2,599,300   | 104.3   | 59,000,000 |
| August.....            | 31          | 744                          | 24           | 1,628,760                            | 52,476                               | 1,675,497,160   | 54,047,320   | 2,611,000  | 84,290  | 5,800  | 2,616,800   | 104.4   | 56,200,000 |
| September.....         | 30          | 720                          | 24           | 1,547,019                            | 51,567                               | 1,593,727,620   | 53,124,264   | 2,439,600  | 84,986  | 3,000  | 2,452,600   | 105.6   | 57,800,000 |
| October.....           | 31          | 744                          | 24           | 1,546,879                            | 49,900                               | 1,592,069,440   | 51,357,080   | 2,439,600  | 78,700  | 11,000   | 2,450,600   | 106.  | 57,400,000 |
| November.....          | 30          | 720                          | 24           | 1,431,235                            | 47,707                               | 1,477,747,780   | 49,258,259   | 2,271,700  | 75,723  | 11,000   | 2,271,700   | 105.4   | 57,400,000 |
| December.....          | 31          | 744                          | 24           | 1,427,853                            | 46,090                               | 1,480,781,700   | 47,767,150   | 2,214,500  | 71,435  | 11,200   | 2,225,700   | 98.6  | 56,400,000 |
| Totals.....            | 365         | 8,790                        | 24           | 13,870,596                           | 460,950                              | 13,447,531,980  | 450,509,880  | 29,573,880   | 91,800  | 21,800   | 29,695,680  | 105.  | 56,700,000 |
| Average per Month..... | 730         | 730                          | 24           | 1,572,542                            | 51,700                               | 1,630,636,832   | 53,280,880   | 2,404,400  | 81,145  | 7,650  | 2,472,140   | 105.  | 56,700,000 |
| Average per Day.....   | 24          | 24                           | 24           | 65,522                               | 2,133                                | 679,432   | 222,462  | 100,167  | 3,381   | 900  | 102,983   | 105.  | 56,700,000 |

NOTE.—No duty figured in January on account of using petroleum oil with coal as fuel.



The following table shows the total quantity of water pumped and the hours run by the four (4) engines respectively:

| Engines Designated. | Hours Run. | Revolutions Made. | Gallons of Water Pumped, less 5% per cent. loss of action. |
|---------------------|------------|-------------------|--|
|                     | H. M.      |                   |  |
| No. 25.....         | 7,542:25   | 4,669,815         | 4,669,815,000  |
| " 26. ....          | 7,431:45   | 4,588,758         | 4,588,758,000  |
| " 50.....           | 7,946:15   | 4,808,843         | 5,097,373,580  |
| " 51.....           | 7,884:15   | 4,808,090         | 5,096,575,400  |
| Total.....          | 30,804.40  | 18,870,506        | 19,447,521,980   |

These Works pumped over fifteen (15) million gallons more per day, or about forty (40) per cent. more in the *aggregate than during last year.*

The following table shows the cost of repairs of engines and boilers, cost of repairs per million gallons, average cost of coal per ton, total cost per million gallons pumped, and cost one foot high, up to December 31, 1885:



TABLE NO. 2.

| YEARS.   | Gallons Pump'd | Head Against Pump. | Cost of Repairs of Engines and Boilers. | Cost of Repairs per Million Gallons.  | Average Cost of Coal per Ton. | Total Cost per Million. | Cost per Million One Foot High.       |
|----------|----------------|--------------------|---|---------------------------------------|-------------------------------|-------------------------|---------------------------------------|
|          |                | FEET.              |   |                                       |                               |                         |                                       |
| 1877.... | 7,088,127,000  | 109.               | \$1,123 61                              | \$0.15 <sup>85</sup> / <sub>100</sub> | \$5 22                        | \$6 66                  | \$0.06 <sup>11</sup> / <sub>100</sub> |
| 1878.... | 8,418,918,000  | 106.               | 583 66                                  | .06 <sup>23</sup> / <sub>100</sub>    | 3 67                          | 5 45                    | .05 <sup>14</sup> / <sub>100</sub>    |
| 1879.... | 9,404,588,000  | 101.               | 1,879 70                                | .23 <sup>13</sup> / <sub>100</sub>    | 2 02                          | 5 02                    | .04 <sup>80</sup> / <sub>100</sub>    |
| 1880.... | 8,648,673,000  | 98.3               | 366 96                                  | .04 <sup>24</sup> / <sub>100</sub>    | 8 60                          | 5 15                    | .05 <sup>24</sup> / <sub>100</sub>    |
| 1881.... | 9,572,845,000  | 90.                | 1,100 18                                | .11 <sup>30</sup> / <sub>100</sub>    | 3 60                          | 5 25                    | .05 <sup>83</sup> / <sub>100</sub>    |
| 1882.... | 10,000,750,000 | 88.2               | 854 90                                  | .08 <sup>84</sup> / <sub>100</sub>    | 3 90                          | 5 00                    | .05 <sup>88</sup> / <sub>100</sub>    |
| 1883.... | 10,376,678,000 | 85.1               | 2,345 63                                | .22 <sup>80</sup> / <sub>100</sub>    | 4 10                          | 5 09                    | .05 <sup>86</sup> / <sub>100</sub>    |
| 1884.... | 13,880,933,680 | 90.5               | 1,285 53                                | .09 <sup>28</sup> / <sub>100</sub>    | 2 96                          | 4 96                    | .05 <sup>48</sup> / <sub>100</sub>    |
| 1885.... | 19,447,521,980 | 105.               | 2,002 11                                | .10 <sup>20</sup> / <sub>100</sub>    | 3 35                          | 4 95                    | .04 <sup>71</sup> / <sub>100</sub>    |

TABLE NO. 3.  
TABLE SHOWING QUANTITY OF WATER PUMPED AT THE "WEST PUMPING WORKS" EACH MONTH  
DURING PAST NINE YEARS.

| MONTHS.        | 1877.         | 1878.         | 1879.         | 1880.         | 1881.         | 1882.          | 1883.          | 1884.          | 1885.          |
|----------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|----------------|
| January.....   | 863,507,000   | 663,352,000   | 845,988,000   | 579,725,000   | 885,170,000   | 765,040,000    | 937,631,000    | 955,490,000    | 1,764,123,600  |
| February.....  | 630,355,000   | 585,950,000   | 775,107,000   | 626,542,000   | 800,886,000   | 740,278,000    | 840,848,000    | 880,546,000    | 1,658,860,700  |
| March.....     | 454,972,000   | 660,264,000   | 846,632,000   | 696,280,000   | 866,546,000   | 800,646,000    | 905,736,000    | 954,418,000    | 1,748,143,220  |
| April.....     | 422,888,000   | 793,902,000   | 823,126,000   | 683,913,000   | 797,300,000   | 821,658,000    | 881,055,000    | 930,908,000    | 1,408,356,720  |
| May.....       | 473,630,000   | 781,498,000   | 858,911,000   | 720,602,000   | 845,572,000   | 852,296,000    | 913,965,000    | 932,907,000    | 1,632,297,020  |
| June.....      | 485,779,000   | 800,213,000   | 820,692,000   | 727,172,000   | 812,954,000   | 836,842,000    | 892,912,000    | 926,524,000    | 1,596,137,620  |
| July.....      | 618,043,000   | 789,700,000   | 738,578,000   | 794,994,000   | 876,338,000   | 858,186,000    | 929,324,000    | 1,061,390,500  | 1,729,898,200  |
| August.....    | 666,266,000   | 784,651,000   | 735,461,000   | 828,475,000   | 892,158,000   | 864,874,000    | 941,678,000    | 3,482,553,340  | 1,675,467,160  |
| September..... | 655,651,000   | 721,226,000   | 675,686,000   | 717,349,000   | 843,576,000   | 832,256,000    | 909,998,000    | 1,404,673,420  | 1,593,797,920  |
| October.....   | 624,664,000   | 687,267,000   | 688,678,000   | 734,456,000   | 579,467,000   | 866,076,000    | 931,694,000    | 1,381,246,760  | 1,592,069,440  |
| November.....  | 599,707,000   | 486,168,000   | 764,259,000   | 722,878,000   | 574,679,000   | 859,408,000    | 519,437,000    | 1,316,406,000  | 1,477,747,780  |
| December.....  | 612,695,000   | 664,717,000   | 831,530,000   | 816,317,000   | 798,199,000   | 913,190,000    | 772,400,000    | 1,624,570,690  | 1,480,781,700  |
| Totals.....    | 7,088,127,000 | 8,418,918,000 | 9,404,588,000 | 8,648,673,000 | 9,572,845,000 | 10,000,750,000 | 10,376,678,000 | 13,880,933,680 | 19,447,521,980 |

Coal has been received and used as follows:

|   | Tons. | Lbs.  |
|---|-------|-------|
| On hand January 1,<br>1885, Pittsburgh<br>nut.....          | 296   | 1,900 |
| Piedmont, W. Va...  | 95    | 400   |
| Received from W. P.<br>Rend & Co.:                          |       |       |
| Pittsburgh nut.....   | 7,062 | 190   |
| “ screenings  | 2,553 | 765   |
| “ lump.....   | 970   | 1,050 |
| Laurel Hill “ .....   | 1,815 | 1,150 |
| Hocking “ .....   | 25    | 1,150 |
| Hocking nut.....  | 234   | 1,025 |
| Pea coal.....   | 1,169 | 400   |
| Piedmont, W. Va...  | 92    | 1,500 |
| Jacksonville.....   | 206   | 750   |
| Miscellaneous coals<br>for testing from<br>other firms..... | 593   | 1,900 |

#### COAL USED.

|  | Tons.         | Lbs.       |               |            |
|--|---------------|------------|---------------|------------|
| For pumping, heat-<br>ing building, etc. | 14,786        | 1,880      |               |            |
| For changing boilers.                    | 45            | 1,800      |               |            |
| On hand January 1,<br>1886.....          | 283           | 500        |               |            |
|  | <u>15,116</u> | <u>180</u> | <u>15,116</u> | <u>180</u> |



## EXPENSES DUE TO PUMPING.

|  |                    |
|--|--------------------|
| Salaries.....                                      | \$34,094 91        |
| Coal, 14,723 $\frac{1880}{1000}$ tons.....         | 49,246 84          |
| Petroleum as fuel.....                             | 1,509 74           |
| Cylinder oil, 1,463 $\frac{1}{2}$ gals.....        | 1,463 50           |
| Lard oil, 153 $\frac{2}{3}$ gals.....              | 110 19             |
| Lubricating compound, 6,839 $\frac{1}{2}$ lbs..... | 1,714 38           |
| Cotton waste.....                                  | 333 37             |
| Gas for year, 1,216,900 cubic ft.....              | 1,825 35           |
| Hardware.....                                      | 96 68              |
| Rubber and packing.....                            | 438 17             |
| Repairs of engines and pumps.....                  | 1,431 01           |
| Repairs of boilers.....                            | 571 10             |
| Fire brick and clay.....                           | 156 00             |
| Fire tile.....                                     | 168 00             |
| Rubber pump valves.....                            | 1,502 20           |
| Six-feet water coils.....                          | 438 00             |
| Grate bars and other castings.....                 | 738 56             |
| Fire hose and extinguisher.....                    | 150 00             |
| Lumber.....  | 10 94              |
| Small stores.....                                  | 392 06             |
| Actual cost for pumping.....                       | <u>\$96,391 00</u> |
| Bills for construction.....                        | <u>\$75 06</u>     |
| Total cost.....                                    | <u>\$96,466 06</u> |



|  |                     |
|--|---------------------|
| Amount of gallons of water pumped      |                     |
| during year.....                       | 19,447,521,980      |
| Cost of pumping.....                   | \$96,391 00         |
| Cost to pump one million gallons....   | 4 95                |
| Average head against pumps during      |                     |
| year.....                              | 105 ft.             |
| Cost of delivering water per million   |                     |
| gallons one foot high.....             | 04 $\frac{11}{100}$ |
| Cost of repairs of engines and boilers |                     |
| per million gallons.....               | 10 $\frac{28}{100}$ |

Distributed as follows:

|                 |                     |
|-----------------|---------------------|
| To engines..... | 07 $\frac{36}{100}$ |
| To boilers..... | 02 $\frac{92}{100}$ |

The following table shows the cost of delivering water per million gallons during the past nine years, and average cost of coal at Works:

| Years.    | Average Cost of<br>Coal per Ton. | Total Cost per<br>Million Gals. |
|-----------|----------------------------------|---------------------------------|
| 1877..... | \$5 22                           | \$6 66                          |
| 1878..... | 3 67                             | 5 45                            |
| 1879..... | 2 62                             | 5 02                            |
| 1880..... | 3 60                             | 5 15                            |
| 1881..... | 3 60                             | 5 25                            |
| 1882..... | 3 90                             | 5 00                            |
| 1883..... | 4 10                             | 5 09                            |
| 1884..... | 2 96                             | 4 96                            |
| 1885..... | 3 35                             | 4 95                            |

## CONSTRUCTION.

A new roof was put on old boiler house during the year, which was badly needed.

Assistant Engineers Stewart, Commons and Mason, and all other employes of these Works, have been faithful in the discharge of their respective duties.

Respectfully submitted,

HENRY MASON,

*Chief Engineer.*

CHICAGO, January 1, 1886.

SAMUEL G. ARTINGSTALL, Esq.,

*City Engineer.*

DEAR SIR: I herewith present Report of the number of Water Meters in use on the 31st day of December, 1884. Also the number added, removed and purchased during the year 1885.

Also the number of hydraulic elevators, together with the amount of revenue collected during the year 1885 for water measured by meters and used by hydraulic elevators.

It will be noticed that there is a decrease in the number of hydraulic elevators added during the year 1885 from that of 1884. Gas engines have been introduced for pumping the water to top of building, thereby using the same water over continually (water first having passed through meter) and dispensing with direct city pressure.

These elevators are not reported as added, which is the reason for said decrease.

Respectfully submitted,

GODFREY J. BAKER,

*Supt. Meters.*

## WATER METERS.

| SIZE OF METERS.                            | $\frac{5}{8}$ " | $\frac{3}{4}$ " | 1"  | 1½" | 2"  | 3"  | 4" | 6" | Total. |
|--|-----------------|-----------------|-----|-----|-----|-----|----|----|--------|
| Number in use December 31st, 1884.....     | 682             | 186             | 916 | 370 | 291 | 285 | 4  | 1  | 2,685  |
| Number added in 1885 .....                 | 47              | 34              | 71  | 60  | 46  | 27  | 0  | 0  | 285    |
| Whole Number.....                          | 679             | 220             | 987 | 430 | 337 | 312 | 4  | 1  | 2,970  |
| Number removed during year 1885.....       | 30              | 8               | 23  | 7   | 1   | 4   | 0  | 0  | 73     |
| Number in use December 31st, 1885.....     | 649             | 212             | 964 | 423 | 336 | 308 | 4  | 1  | 2,897  |
| Meters owned by the city.....              | 336             | 47              | 587 | 145 | 92  | 163 | 1  | 0  | 1,371  |
| Meters owned by private parties.....       | 313             | 165             | 377 | 278 | 244 | 145 | 3  | 1  | 1,526  |
| Total in use.....                          | 649             | 212             | 964 | 423 | 336 | 308 | 4  | 1  | 2,897  |
| Number purchased from manufacturer.....    | 1               | 26              | 18  | 34  | 38  | 16  | 0  | 0  | 133    |
| Number purchased from private parties..... | 10              | 5               | 7   | 2   | 0   | 1   | 0  | 0  | 25     |
| Total.....                                 | 11              | 31              | 25  | 36  | 38  | 17  | 0  | 0  | 158    |
| Number on hand December 31st, 1885.....    | 33              | 19              | 10  | 6   | 4   | 11  | 1  | 0  | 84     |



## HYDRAULIC ELEVATORS.

|  |     |
|--|-----|
| Number in use December 31st, 1883..... | 407 |
| Number added during year, 1884.....    | 38  |
| Number in use December 31st, 1884..... | 445 |
| Number added during year 1885.....     | 32  |
| Number in use December 31st, 1885..... | 477 |

Revenue collected during the year 1885 for water measured by meters and used by hydraulic elevators amounts to \$455,862 29, being an increase of \$47,-796 40 over the amount collected from same sources during the year 1884.

## WATER PIPE EXTENSION.

The noticeable features of this work during the past year are the increased quantities of 24-inch, 16-inch and 12-inch mains laid, the substitution of larger distribution pipes for that previously laid on many streets, and the lowering of distribution pipe on many others.

The total quantity of pipe laid is about .63 of a mile less than was laid in 1884, and amounts to  $29\frac{2}{3}\frac{6}{10}$  miles. Of this over two miles is of 24-inch main; about three miles is 16-inch main, and about two miles is 12-inch main. We have now lines of 24-inch main running to Western avenue on Twenty-

first and Division streets, and one on Harrison street running to Rockwell street. The amount of 4-inch distribution pipe laid decreases each year, and it is now our policy to lay it only on very short and unimportant streets.

We have laid, at the request and expense of property owners, 10,171 feet of distribution pipe, the cost of which will be refunded to them when the required revenue is received from it.

The pipe taken up or abandoned during the year, and for which larger pipe has been substituted, consists of 27,040 feet of 4-inch, 6,645 feet of 6-inch, 1,568 feet of 8-inch, 335 feet of 12-inch and 2,531 feet of 16-inch, or 7.22 miles in all. The 16-inch pipe was taken out of Main street, and was replaced by 24-inch. The 4-inch pipe was replaced by 6" or 8," the 6" generally by 8" and the 8" by 12".

The net increase of pipe added to the system during the year is 21.78 miles, and the total amount of all sizes in use by the city at the end of the year is 565.15 miles.

The whole number of stop valves and feeder cocks placed during the year is 202. Deducting from this 28, the number of small valves taken out and replaced by larger ones, leaves a net increase of 174, and the whole number now in use in our system 4,196.



The total number of fire hydrants planted during the year is 373. We have taken out 46—net increase 327—and the whole number of all sizes in the city 4,943.

Fire cisterns were built during the year at the following places:

Intersection of Dearborn and Monroe streets.

Intersection of Dearborn and Washington streets.

Intersection of Market and Monroe streets.

Intersection of Wabash avenue and Adams street.

Intersection of Wabash ave. and Van Buren street.

Intersection of Wabash ave. and Harrison street.

Intersection of LaSalle and Quincy streets.

Chicago avenue at Water Works Shops.

We have again found it necessary to lower the mains in order to protect service pipes from frost on many streets where the pipe has been laid for years. The necessity has arisen in most of these cases from the cutting down of the natural surface of the ground to conform to the established grade, which has left our mains in many cases less than three feet deep. The work comprises about 26,000 feet, distributed in the following streets:

| STREET.                | FROM                    | TO                      |
|------------------------|-------------------------|-------------------------|
| Belden avenue.....     | Burling street.....     | Halsted street.....     |
| Blue Island avenue.... | Harrison street.....    | Taylor street.....      |
| Dearborn street.....   | Douglas avenue.....     | Egan avenue.....        |
| Douglas avenue.....    | Ellis avenue.....       | Lake avenue.....        |
| Garfield avenue.....   | Clark street.....       | Halsted street.....     |
| Hurlbut street.....    | Menominee street.....   | Webster avenue.....     |
| Hurlbut street.....    | Belden avenue.....      | Fullerton avenue.....   |
| Larrabee street.....   | Belden avenue.....      | (Crossing).....         |
| Milwaukee avenue.....  | Austin avenue.....      | Ohio street.....        |
| Monroe street.....     | Clark street.....       | State street.....       |
| Paulina street.....    | Walnut street.....      | Fulton street.....      |
| Randolph street.....   | Union park.....         | Carpenter street.....   |
| Robey street.....      | Fulton street.....      | Walnut street.....      |
| Sedgwick street.....   | Center street.....      | Clark street.....       |
| Sixteenth street.....  | Michigan avenue.....    | Indiana avenue.....     |
| State street.....      | 250 feet N. of Elm st.. | 250 feet S. of Oak st.. |
| Vernon avenue.....     | Douglas avenue.....     | Thirty-seventh street.  |
| Webster avenue.....    | Orchard street.....     | Burling street.....     |
| Wood street.....       | Rice street.....        | Jane street.....        |
| Wood street.....       | Huron street.....       | Chicago avenue.....     |



THE FOLLOWING TABULATED STATEMENTS SHOW IN DETAIL THE WORK DONE IN WATER-PIPE EXTENSION DURING THE YEAR:

## NORTH DIVISION.

| STREET.                                   | BETWEEN WHAT STREETS.                   | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|---|---|--------------------------|----------------------------|
| Alley betw'n Clark<br>and Dearborn sts. } | Division and Oak streets.....           | 1,211                    | 16                         |
| Alley betw'n Clark<br>and Dearborn sts. } | Oak street intersection.....            | 31                       | 24                         |
| Astor street.....                         | North crossing, on Schiller street....  | 62                       | 6                          |
| Belden avenue.....                        | Sheffield avenue and Fremont street..   | 632                      | 6                          |
| Belden avenue.....                        | Crossing on Southport avenue.....       | 160                      | 6                          |
| Belden avenue.....                        | Hurlbut and Burling streets.....        | 1,513                    | 6                          |
| Belden avenue.....                        | Hurlbut and Clark streets.....          | 426                      | 6                          |
| Belden avenue.....                        | Crossing on Hurlbut street.....         | 80                       | 8                          |
| Bellevue place.....                       | State street, westward.....             | 50                       | 4                          |
| *Bissell street.....                      | Webster and Belden avenues.....         | 654                      | 6                          |
| Blackhawk street...                       | Crossing on Cherry street.....          | 55                       | 6                          |
| Center street.....                        | Racine and Sheffield avenues.....       | 1,270                    | 6                          |
| Center street.....                        | East crossing on Clark street.....      | 37                       | 8                          |
| Cherry street.....                        | Crossing on Division street.....        | 70                       | 8                          |
| Cherry street.....                        | Blackhawk street, northward.....        | 557                      | 8                          |
| Clark street.....                         | Division and Center streets.....        | 5,607                    | 16                         |
| Clark street.....                         | Center street and Webster avenue....    | 1,500                    | 12                         |
| Clybourn place.....                       | Clybourn and Southport avenues.....     | 1,337                    | 6                          |
| Crilly place.....                         | Eugenie and Florimond streets.....      | 266                      | 4                          |
| Division street.....                      | Clark street, eastward.....             | 182                      | 16                         |
| Division street.....                      | North Branch street and the river....   | 390                      | 4                          |
| Division street.....                      | Hickory street and the canal.....       | 514                      | 6                          |
| Division street.....                      | Hickory and Cherry streets.....         | 480                      | 8                          |
| Edward street.....                        | Garfield avenue, northward.....         | 254                      | 4                          |
| Elm street.....                           | La Salle avenue, westward.....          | 190                      | 4                          |
| Franklin street.....                      | Chicago avenue and Division street...   | 2,472                    | 6                          |
| Hobbie street.....                        | Milton avenue and Larrabee street...    | 361                      | 6                          |
| Hooker street.....                        | Crossing on Division street.....        | 80                       | 6                          |
| Hurlbut street.....                       | Webster and Belden avenues.....         | 688                      | 8                          |
| Jay street.....                           | Center street, northward.....           | 72                       | 6                          |
| Jay street.....                           | Garfield avenue, southward.....         | 452                      | 6                          |
| Kingsbury street...                       | Chicago avenue and Superior street...   | 368                      | 8                          |
| Marcy street.....                         | South crossing on Clybourn place....    | 85                       | 6                          |
| Menominee street...                       | Crossing on Clark street.....           | 55                       | 8                          |
| Oak street.....                           | Alley east of Clark street, eastward... | 12                       | 24                         |
| Ohio street.....                          | St. Clair street, eastward.....         | 234                      | 6                          |
| Pearson street.....                       | Crossing at Water Works.....            | 36                       | 4                          |
| Schiller street.....                      | Astor street and Lake Shore Drive....   | 324                      | 6                          |
| Sedgwick street.....                      | Clark street and Belden avenue.....     | 210                      | 6                          |
| Seminary avenue...                        | Center street, northward.....           | 260                      | 6                          |
| Seminary avenue...                        | Webster and Fullerton avenues.....      | 1,259                    | 6                          |

\*Laid at expense of property owners.

## NORTH DIVISION.—CONTINUED.

| STREET.               | BETWEEN WHAT STREETS.                 | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|-----------------------|---------------------------------------|--------------------------|----------------------------|
| Sheffield avenue..... | Center street and Webster avenue..... | 1,398                    | 8                          |
| *Sheffield avenue.... | Belden avenue, northward.....         | 415                      | 8                          |
|                       | Total.....                            | 26,159                   | .....                      |
|                       | Add branch pipe for hydrants.....     | 178                      | 4                          |
|                       | Add branch pipe for hydrants.....     | 587                      | 6                          |
|                       | Total feet laid in North Division..   | 26,874                   | .....                      |

\*Laid at expense of property owners.

## SOUTH DIVISION.

| STREET.                                    | BETWEEN WHAT STREETS.                                   | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|--|---|--------------------------|----------------------------|
| Alexander street....                       | Stewart avenue, westward.....                           | 48                       | 4                          |
| Alley east of Dearborn st. (1st alley).... | North crossing on Monroe street.....                    | 42                       | 6                          |
| Alley east of Dearborn st. (2d alley)....  | North crossing on Monroe street.....                    | 42                       | 6                          |
| Alley W. of Michigan avenue.....           | Lake street, northward.....                             | 174                      | 8                          |
| Alley S. of Groveland Park.....            | 548 feet east of Cottage Grove avenue,<br>eastward..... | 110                      | 4                          |
| Alley S. of Douglas ave. (1st alley)....   | Vincennes avenue, westward.....                         | 700                      | 4                          |
| Arch street.....                           | Archer avenue, southward.....                           | 418                      | 4                          |
| Auburn street.....                         | South crossing on Thirty-first street..                 | 42                       | 6                          |
| Beers street.....                          | Thirty-sixth and Thirty-eighth streets                  | 1,320                    | 12                         |
| Beers street.....                          | Egan avenue, northward.....                             | 187                      | 8                          |
| Butler street.....                         | North crossing on Thirty-seventh st.                    | 36                       | 6                          |
| Butler street.....                         | Thirty-sixth and Thirty-seventh sts.,                   | 647                      | 6                          |
| Butler street.....                         | North crossing on Thirty-eighth st.                     | 25                       | 6                          |
| Butterfield street....                     | Crossing on Twenty-second street....                    | 67                       | 6                          |
| Butterfield street....                     | Crossing on Twenty-fourth street....                    | 72                       | 6                          |
| Butterfield street....                     | Douglas avenue and Thirty-fourth st.                    | 648                      | 4                          |
| Calhoun place.....                         | Dearborn and Clark streets.....                         | 400                      | 8                          |
| Dashiel street.....                        | Crossing on Douglas avenue.....                         | 90                       | 8                          |
| Dearborn place.....                        | Madison and Washington streets....                      | 318                      | 6                          |
| Dearborn street.....                       | Van Buren and Polk streets.....                         | 2,168                    | 8                          |
| Dearborn street.....                       | North crossing on Twenty-second st.                     | 27                       | 6                          |
| Douglas avenue.....                        | Emerald avenue and Halsted street..                     | 335                      | 6                          |
| Douglas avenue.....                        | Laurel and State streets.....                           | 6,645                    | 16                         |
| Egan avenue.....                           | Indiana and Prairie avenues.....                        | 300                      | 6                          |
| Egan avenue.....                           | Michigan and Indiana avenues.....                       | 411                      | 4                          |
| Egan avenue.....                           | Wallace street and Stewart avenue..                     | 1,023                    | 4                          |
| Fifth avenue.....                          | Crossing on Thirty-seventh street....                   | 75                       | 6                          |
| Fifth avenue.....                          | Thirty seventh street, southward.....                   | 190                      | 4                          |
| Fox street.....                            | Thirty-first street and James avenue..                  | 326                      | 6                          |
| Haddock place.....                         | Wabash avenue, eastward.....                            | 166                      | 8                          |
| Halsted street.....                        | Crossing on Douglas avenue.....                         | 66                       | 8                          |
| Illinois avenue.....                       | North crossing on Thirty-third street.                  | 8                        | 4                          |
| Indiana avenue.....                        | North crossing on Egan avenue.....                      | 23                       | 6                          |
| James avenue.....                          | East crossing on Mospratt street.....                   | 41                       | 6                          |
| Laurel street.....                         | Thirty-second street, southward....                     | 47                       | 8                          |
| Laurel street.....                         | South crossing on Douglas avenue....                    | 36                       | 12                         |
| Laurel street.....                         | North crossing on Douglas avenue....                    | 44                       | 16                         |
| Laurel street.....                         | Thirty-first street and Douglas avenue                  | 2,620                    | 24                         |
| Main street.....                           | Cologne street, northward.....                          | 307                      | 6                          |
| Main street.....                           | Archer avenue and Thirty-first street.                  | 2,311                    | 24                         |
| Michigan avenue....                        | North crossing on Egan avenue.....                      | 23                       | 6                          |
| Mospratt street.....                       | Thirty-first street and Springer ave..                  | 960                      | 6                          |
| Oakley avenue.....                         | Archer and Douglas avenues.....                         | 1,066                    | 6                          |



## SOUTH DIVISION—CONTINUED.

| STREET.                | BETWEEN WHAT STREETS.                 | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|------------------------|---------------------------------------|--------------------------|----------------------------|
| Oxford court .....     | West crossing on Stanton avenue....   | 27                       | 4                          |
| Portland avenue....    | Crossing on Thirty-seventh street.... | 75                       | 6                          |
| Prairie avenue.....    | Thirty-third street, southward.....   | 462                      | 6                          |
| Prairie avenue.....    | Thirty-seventh street, southward..... | 600                      | 6                          |
| Quincy street.....     | La Salle street and Fifth avenue..... | 432                      | 8                          |
| Shields avenue.....    | Crossing on Thirty-seventh street.... | 71                       | 6                          |
| Stanton avenue.....    | Egan avenue, northward.....           | 620                      | 6                          |
| Stewart avenue.....    | North crossing on Alexander street..  | 8                        | 8                          |
| Thirty-first street. . | Main and Laurel streets.....          | 440                      | 24                         |
| Thirty-second street.  | Laurel and Mospratt streets.....      | 665                      | 6                          |
| Thirty-third street..  | Auburn and Halsted streets.....       | 662                      | 4                          |
| Thirty-fourth street.  | Vernon and Rhodes avenues.....        | 347                      | 4                          |
| Thirty-fourth street.  | Crossing on Dearborn street.....      | 72                       | 6                          |
| Thirty-fifth court...  | Oakley avenue, westward.....          | 258                      | 4                          |
| Thirty-sixth street... | Parnell avenue and Butler street..... | 336                      | 6                          |
| Thirty-sixth street... | Wabash avenue and State street.....   | 333                      | 4                          |
| Thirty-sixth street... | Oakley avenue, westward.....          | 384                      | 4                          |
| Thirty-eighth street.  | Crossing on Dearborn street.....      | 75                       | 6                          |
| Thirty-eighth street.  | Butler street, eastward.....          | 440                      | 6                          |
| Twenty-second st...    | State and Dearborn streets.....       | 400                      | 6                          |
| Twenty-fourth street   | Butterfield and State streets.....    | 493                      | 6                          |
| Van Buren street....   | Crossing on Wabash avenue.....        | 106                      | 8                          |
| Wallace street.....    | North Crossing on Egan avenue....     | 23                       | 8                          |
| Wallace street.....    | Crossing on Douglas avenue.....       | 90                       | 8                          |
| Wentworth avenue..     | Crossing on Douglas avenue.....       | 90                       | 8                          |
|                        | Total.....                            | 32,063                   | .....                      |
|                        | Add branch pipes for hydrants.....    | 282                      | 4                          |
|                        | Add branch pipes for hydrants.....    | 795                      | 6                          |
|                        | Total feet laid in South Division..   | 33,140                   |                            |



## WEST DIVISION.

| STREET.                                     | BETWEEN WHAT STREETS.                  | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|---|--|--------------------------|----------------------------|
| Albany avenue.....                          | Washington street and Warren ave....   | 285                      | 6                          |
| Alley W. of Morgan<br>street (1st alley)... | North crossing on Van Buren street..   | 43                       | 4                          |
| Alley W. of Morgan<br>street (2d alley)...  | North crossing on Van Buren street..   | 50                       | 4                          |
| Alley W. of Aber-<br>deen st. (1st alley)   | North crossing on Van Buren street..   | 27                       | 4                          |
| Alley W. of Aber-<br>deen st. (2d alley)    | North crossing on Van Buren street..   | 27                       | 4                          |
| Alley S. of Chicago<br>avenue.....          | May street, westward.....              | 80                       | 4                          |
| Alley N. of Jack-<br>son st. (1st alley).   | Throop street, westward.....           | 163                      | 4                          |
| Armitage av., S. side                       | Robey street, westward.....            | 325                      | 4                          |
| Armitage av., N. side                       | Robey street, westward.....            | 325                      | 4                          |
| Armitage avenue....                         | Oakley and Western avenues.....        | 625                      | 4                          |
| Armitage avenue....                         | Commercial and Paulina streets.....    | 307                      | 4                          |
| Armour street.....                          | Chicago avenue and Huron street....    | 632                      | 6                          |
| Arthington street....                       | Loomis and Sibley streets.....         | 373                      | 4                          |
| *Ashland street.....                        | Cypress and Olive streets.....         | 600                      | 6                          |
| Ashland avenue.....                         | Blue Island avenue, southward.....     | 2,376                    | 6                          |
| Augusta street.....                         | Will street, eastward.....             | 205                      | 6                          |
| Augusta street.....                         | West crossing on Western avenue....    | 35                       | 8                          |
| Austin avenue.....                          | Sangamon and Carpenter streets....     | 470                      | 6                          |
| Austin avenue.....                          | Green street and Milwaukee avenue..    | 660                      | 6                          |
| Bickerdike street....                       | Erie and Huron streets.....            | 387                      | 6                          |
| Bryson street.....                          | Leavitt street, eastward.....          | 345                      | 6                          |
| *California avenue..                        | Van Buren and Congress streets.....    | 389                      | 12                         |
| California avenue..                         | Ambrose street, northward.....         | 127                      | 8                          |
| California avenue..                         | Laughton and Parmelee streets.....     | 312                      | 8                          |
| †California avenue..                        | Twelfth and Harvard streets.....       | 1,352                    | 6                          |
| Carpenter street....                        | North crossing on Milwaukee avenue..   | 30                       | 6                          |
| Carroll avenue.....                         | Ada street, eastward.....              | 318                      | 4                          |
| Center avenue.....                          | Augusta street, southward.....         | 138                      | 6                          |
| Chicago avenue.....                         | Hoyne and Western avenues.....         | 1,997                    | 16                         |
| Chicago avenue.....                         | Wood street and Ashland avenue....     | 1,416                    | 6                          |
| Cicero court.....                           | Van Buren and Congress streets.....    | 410                      | 4                          |
| Clarinda street.....                        | East crossing on Wood street.....      | 48                       | 6                          |
| Clybourn place.....                         | Ashland and Elston avenues.....        | 390                      | 6                          |
| Coblentz street.....                        | Robey street, westward.....            | 1,030                    | 6                          |
| Colorado avenue....                         | Albany and Sacramento avenues.....     | 502                      | 8                          |
| *Congress street....                        | California ave. and Francisco street.. | 620                      | 6                          |
| Congress street.....                        | Green and Morgan streets.....          | 739                      | 6                          |
| Cornelia street.....                        | East crossing on Wood street.....      | 40                       | 6                          |
| Cornelia street.....                        | West crossing on Milwaukee avenue..    | 42                       | 8                          |

\*Laid at expense of property owners.

†Of this distance 702 feet were laid at expense of property owners.

## WEST DIVISION.—CONTINUED.

| STREET.                | BETWEEN WHAT STREETS.                  | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|------------------------|--|--------------------------|----------------------------|
| Coulter street....     | Western avenue and Chase street....    | 250                      | 6                          |
| Coulter street....     | Hoyne avenue, westward.....            | 455                      | 6                          |
| Coulter street....     | Robey street, westward.....            | 175                      | 6                          |
| Crystal street....     | Robey street, westward.....            | 350                      | 4                          |
| Curtis street....      | Kinzie and Huron streets.....          | 1,890                    | 8                          |
| Cypress street....     | Ashland and Taylor streets.....        | 396                      | 6                          |
| Division street....    | Robey street and Western avenue....    | 2,628                    | 24                         |
| *Dudley street....     | Clybourn place, southward.....         | 400                      | 6                          |
| Dudley street....      | North and Wabansia avenues.....        | 631                      | 6                          |
| Eighteenth street....  | Hoyne avenue and Leavitt street....    | 665                      | 6                          |
| †Eighteenth street.... | Oakley avenue, westward.....           | 625                      | 4                          |
| Eleventh street....    | Lafin street, westward.....            | 178                      | 4                          |
| Emerson avenue....     | Robey street, westward.....            | 300                      | 6                          |
| Emily street....       | East crossing on Wood street....       | 36                       | 6                          |
| Erie street....        | East crossing on Western avenue....    | 14                       | 6                          |
| Erie street....        | Carpenter street and Center avenue..   | 926                      | 6                          |
| Ewing street....       | Halsted st. and Blue Island avenue..   | 730                      | 6                          |
| Falls street....       | Washington boulevard and Park ave..    | 218                      | 6                          |
| Fairfield avenue....   | Twelfth street, northward.....         | 400                      | 6                          |
| Ferdinand street....   | West crossing on Paulina street.....   | 32                       | 4                          |
| Fifteenth street....   | Washtenaw avenue, eastward.....        | 275                      | 6                          |
| Fifteenth street....   | Talman avenue, eastward.....           | 137                      | 6                          |
| Fillmore street....    | Campbell avenue and Rockwell st....    | 650                      | 6                          |
| *Fillmore street....   | California avenue and Francisco st.... | 634                      | 6                          |
| Fisk street....        | Twenty-second street, southward....    | 400                      | 6                          |
| Flournoy street....    | Oakley and Western avenues.....        | 650                      | 6                          |
| Francisco street....   | Washington boulevard and Lake st....   | 428                      | 6                          |
| Front street....       | Sangamon street and Elston avenue..    | 1,213                    | 6                          |
| Genesee avenue....     | Twenty-third street and Ogden ave..    | 1,308                    | 6                          |
| Genesee avenue....     | Twenty-fifth street, southward.....    | 96                       | 4                          |
| Gilpin place....       | Crossing on Sibley street.....         | 92                       | 6                          |
| Gilpin place....       | Loomis and Sibley streets.....         | 288                      | 4                          |
| Girard street....      | Armitage avenue, northward.....        | 465                      | 6                          |
| Girard street....      | North and Wabansia avenues.....        | 618                      | 6                          |
| Grand avenue....       | Rockwell street and Wright place....   | 250                      | 6                          |
| Green street....       | Madison street and Washington b'd..    | 450                      | 6                          |
| Green street....       | Austin and Milwaukee avenues.....      | 708                      | 8                          |
| Gross parkway....      | Rockwell and Seymour streets.....      | 630                      | 6                          |
| Gross terrace....      | North crossing on Colorado avenue..    | 28                       | 6                          |
| *Harvard street....    | California avenue and Francisco st.... | 620                      | 6                          |
| Hastings street....    | West crossing on Robey street.....     | 25                       | 6                          |
| Hermitage avenue....   | Taylor and Twelfth streets.....        | 481                      | 6                          |
| Hervey street....      | Girard and Dudley streets.....         | 620                      | 4                          |
| Holt street....        | Augusta street, southward.....         | 94                       | 4                          |
| Herman avenue....      | Washington boulevard and Park ave..    | 280                      | 8                          |
| Homer street....       | Leavitt street, westward.....          | 318                      | 6                          |
| Hoyne avenue....       | Crossing on Twenty-first street....    | 81                       | 6                          |
| Hoyne avenue....       | Armitage avenue, northward.....        | 442                      | 6                          |
| Hoyne avenue....       | Harrison and Flournoy streets.....     | 240                      | 6                          |

\*Laid at expense of property owners.

†Of this distance 366 feet were laid at expense of property owners.



## WEST DIVISION.—CONTINUED.

| STREET.              | BETWEEN WHAT STREETS.                                 | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|----------------------|---|--------------------------|----------------------------|
| Hoyne avenue.....    | Moore and Parmelee streets.....                       | 316                      | 6                          |
| Huron street.....    | Center and Ashland avenues.....                       | 2,567                    | 8                          |
| Huron street.....    | Crossing on Paulina street.....                       | 63                       | 8                          |
| Huron street.....    | Crossing on Wood street.....                          | 90                       | 8                          |
| Idaho street.....    | Van Buren street, southward.....                      | 136                      | 6                          |
| Indiana street.....  | Center and Ashland avenues.....                       | 2,620                    | 6                          |
| Jane street.....     | East crossing on Wood street.....                     | 58                       | 6                          |
| *Kedzie avenue....   | 260 ft. N. of 19th st. and 160 ft. S. of 21st st..... | 1,098                    | 8                          |
| Kendall street.....  | North crossing on Taylor street.....                  | 16                       | 6                          |
| Lafin street.....    | Twenty-second street, southward.....                  | 700                      | 6                          |
| Lafin street.....    | Plum and Spencer streets.....                         | 300                      | 6                          |
| Laughton street..... | Washtenaw avenue, westward.....                       | 300                      | 6                          |
| Leavitt street.....  | Division street, northward.....                       | 230                      | 8                          |
| Leavitt street.....  | Courtland and Coblenz streets.....                    | 812                      | 8                          |
| Leavitt street.....  | Crossing on Twenty-first street.....                  | 100                      | 8                          |
| Lincoln street.....  | Crossing on Twenty-first street.....                  | 81                       | 6                          |
| Lubeck street.....   | Leavitt street and Oakley avenue....                  | 645                      | 6                          |
| Lydia street.....    | Desplaines and Union streets.....                     | 310                      | 6                          |
| Lydia street.....    | East crossing on Halsted street.....                  | 43                       | 6                          |
| Madison street.....  | Sacramento ave. and Gross terrace...                  | 225                      | 8                          |
| Maplewood avenue..   | Hirsch street, southward.....                         | 76                       | 6                          |
| Mather street.....   | Halsted street, eastward.....                         | 410                      | 6                          |
| Monroe street.....   | Albany avenue, westward.....                          | 240                      | 4                          |
| Moore street.....    | West crossing on Hoyne avenue.....                    | 25                       | 6                          |
| Moore street.....    | Hoyne avenue and Robey street.....                    | 633                      | 6                          |
| Morgan street.....   | Milwaukee avenue, southwestward..                     | 130                      | 8                          |
| Nebraska street..... | Ashland avenue, eastward.....                         | 332                      | 4                          |
| Newton street.....   | Augusta street, northward.....                        | 386                      | 4                          |
| *Nineteenth street.. | Sawyer street and Kedzie avenue.....                  | 330                      | 4                          |
| Oakley avenue.....   | Homer street and Wilmot avenue....                    | 214                      | 6                          |
| Oakley avenue.....   | Van Buren and 160 ft. N. of Jackson st                | 622                      | 6                          |
| Oakley avenue.....   | Thirteenth street, southward.....                     | 386                      | 6                          |
| *Olive street.....   | Ashland and Twelfth street.....                       | 360                      | 4                          |
| Park avenue.....     | Falls street, westward.....                           | 675                      | 6                          |
| Paulina street.....  | Lake and Kinzie streets.....                          | 1,046                    | 8                          |
| Paulina street.....  | Warren avenue and Lake street.....                    | 1,058                    | 6                          |
| Paulina street.....  | Chicago avenue and Erie street.....                   | 896                      | 6                          |
| Paulina street.....  | Indiana street and Austin avenue....                  | 354                      | 6                          |
| Paulina street.....  | Crossing on Twenty-first street.....                  | 78                       | 6                          |
| Paulina street.....  | South crossing on Polk street.....                    | 45                       | 6                          |
| Paulina street.....  | South crossing on Jackson street.....                 | 30                       | 6                          |
| Polk street.....     | East crossing on Paulina street.....                  | 50                       | 8                          |
| Quincy street.....   | Halsted street, eastward.....                         | 460                      | 6                          |
| Robey street.....    | Fulton and Carroll streets.....                       | 241                      | 6                          |
| Robey street.....    | Lake and Walnut streets.....                          | 248                      | 6                          |
| Robey street.....    | Armitage avenue and Coblenz street..                  | 295                      | 8                          |
| Robey street.....    | Iowa street, northward.....                           | 473                      | 6                          |
| *Robey street.....   | Hastings street, southward.....                       | 564                      | 6                          |
| Rockwell street....  | Ogden avenue, northward.....                          | 555                      | 4                          |

\*Laid at expense of property owners.

## WEST DIVISION.—CONTINUED.

| STREET.                            | BETWEEN WHAT STREETS.                  | Length of<br>Pipe in ft. | Diameter of<br>Pipe in in. |
|------------------------------------|--|--------------------------|----------------------------|
| Rosebud street.....                | Western avenue and Upton street....    | 486                      | 6                          |
| Rundall place.....                 | Morgan and Aberdeen streets.....       | 691                      | 4                          |
| Sacramento street...               | Madison and Monroe streets.....        | 235                      | 8                          |
| Sacramento street...               | Colorado avenue, southward.....        | 293                      | 8                          |
| Sangamon street.....               | North crossing on Milwaukee avenue..   | 29                       | 6                          |
| Sangamon street.....               | Front street, northward.....           | 220                      | 6                          |
| *Sawyer street.....                | Twenty-first street, southward.....    | 150                      | 4                          |
| *Sawyer street.....                | Ogden avenue and Nineteenth street..   | 687                      | 6                          |
| Seventeenth street...              | Wood and Lincoln streets.....          | 625                      | 6                          |
| *Shober street.....                | Hirsch and Bryson streets.....         | 642                      | 6                          |
| Shober street.....                 | Bryson street, southward.....          | 508                      | 6                          |
| Sibley street.....                 | Macalister place and Arthington st..   | 588                      | 6                          |
| Stevens street.....                | Van Buren street, northward.....       | 170                      | 6                          |
| Superior street.....               | Crossing on Wood street.....           | 51                       | 6                          |
| Talman avenue.....                 | Ogden avenue, northward.....           | 135                      | 6                          |
| *Taylor street.....                | California avenue and Francisco st.... | 610                      | 4                          |
| Taylor street.....                 | Wood street and Hermitage avenue..     | 333                      | 8                          |
| Taylor street.....                 | Cypress and Kendall streets.....       | 335                      | 8                          |
| Thirteenth place.....              | Hoyne avenue and Leavitt street.....   | 700                      | 6                          |
| Thirteenth street.....             | Blue Island avenue and Laflin street.. | 2,454                    | 8                          |
| Thirteenth street.....             | East crossing on Oakley avenue.....    | 41                       | 6                          |
| Thirteenth street.....             | Robey street, eastward.....            | 120                      | 6                          |
| Throop street.....                 | Twenty-second street, southward....    | 1,415                    | 6                          |
| Twelfth street.....                | East crossing on California avenue..   | 22                       | 8                          |
| Twentieth street...                | East crossing on Western avenue.....   | 25                       | 6                          |
| Twenty-first street..              | Robey street and Western avenue....    | 2,623                    | 24                         |
| *Twenty-first street..             | Sawyer street and Kedzie avenue.....   | 330                      | 4                          |
| Upton street.....                  | Western avenue, eastward.....          | 180                      | 6                          |
| Van Buren street....               | Sacramento street, westward.....       | 130                      | 6                          |
| Warren avenue.....                 | California avenue, eastward.....       | 118                      | 4                          |
| Warren avenue.....                 | Albany and California avenues.....     | 2,168                    | 6                          |
| Washtenaw avenue..                 | Lake and Fulton streets.....           | 811                      | 8                          |
| Washtenaw avenue..                 | Laughton street, northward.....        | 160                      | 8                          |
| Washtenaw avenue..                 | Ogden avenue and Fifteenth street..    | 413                      | 8                          |
| Western avenue.....                | Twentieth and Twenty-first streets..   | 310                      | 4                          |
| Western avenue.....                | Monroe and Lake streets.....           | 1,835                    | 12                         |
| Western avenue.....                | Indiana and Division streets.....      | 4,564                    | 12                         |
| Wilmot avenue.....                 | Armitage avenue, southward.....        | 210                      | 6                          |
| Wright place.....                  | Grand avenue and Huron street.....     | 414                      | 4                          |
| York street.....                   | West crossing on Laflin street.....    | 27                       | 6                          |
| York street.....                   | East crossing on Paulina street.....   | 44                       | 6                          |
| Total.....                         |  | 89,905                   | .....                      |
| Add branch pipes for hydrants..... |  | 468                      | 4                          |
| Add branch pipes for hydrants..... |  | 2,759                    | 6                          |
| Total laid in West Division.....   |  | 93,132                   | .....                      |

\*Laid at expense of property owners.





**RECAPITULATION OF HYDRANT BRANCHES LAID DURING  
1885.**

| DIVISION.        | Length of Pipe<br>in Feet. | Diameter of<br>Pipe in Inches. | Length of Pipe<br>in Feet. | Diameter of<br>Pipe in Inches. | Total Laid<br>in<br>Feet. |
|------------------|----------------------------|--------------------------------|----------------------------|--------------------------------|---------------------------|
| North .....      | 178                        | 4                              | 537                        | 6                              | 715                       |
| South .....      | 282                        | 4                              | 795                        | 6                              | 1,077                     |
| West .....       | 468                        | 4                              | 2,759                      | 6                              | 3,227                     |
| Total feet ..... | 928                        | 4                              | 4,091                      | 6                              | 5,019                     |

# PIPE TAKEN UP OR ABANDONED DURING 1885.

The following statement shows in detail the location and size of pipe taken up or abandoned during 1885, and of that substituted therefor:

| STREET.  | PART OF STREET.                     | TAKEN UP OR<br>ABANDONED. |                        | SUBSTITUTED.         |                        |
|--|-------------------------------------|---------------------------|------------------------|----------------------|------------------------|
|  |                                     | Distance in<br>feet.      | Diameter in<br>inches. | Distance in<br>feet. | Diameter in<br>inches. |
| *Alley W. of Michigan<br>ave. and N. of Lake st. | Lake st., northward.....            | 174                       | 4                      | 174                  | 8                      |
| Ashland ave...                                   | Blue Island ave., southward.....    | 728                       | 4                      | 728                  | 6                      |
| Austin ave.....                                  | Green st. to Milwaukee ave.....     | 660                       | 4                      | 660                  | 6                      |
| Austin ave.....                                  | Sangamon st. to Carpenter st.....   | 426                       | 4                      | 426                  | 6                      |
| Belden ave.....                                  | Crossing on Hurlbut st.....         | 80                        | 4                      | 80                   | 8                      |
| Belden ave.....                                  | Lincoln ave. to Burling st.....     | 275                       | 4                      | 275                  | 6                      |
| Belden ave.....                                  | Hurlbut st. to Larrabee st.....     | 630                       | 4                      | 630                  | 6                      |
| Butterfield st...                                | Twenty-second st., northward.....   | 26                        | 4                      | 26                   | 6                      |
| Clybourn pl...                                   | Coventry st., westward.....         | 126                       | 4                      | 126                  | 6                      |
| Cherry st.....                                   | Crossing on Division st.....        | 70                        | 4                      | 70                   | 8                      |
| Curtis st.....                                   | Kinzie st. to Huron st.....         | 1,790                     | 4                      | 1,890                | 8                      |
| Dashiel st.....                                  | Crossing on Douglas ave.....        | 90                        | 6                      | 90                   | 8                      |
| Dearborn st...                                   | Madison st. to Washington st.....   | 366                       | 4                      | .....                | .....                  |
| Dearborn st...                                   | Washington st. to Randolph st.....  | 389                       | 4                      | .....                | .....                  |
| Dearborn st...                                   | Twenty-second st., northward.....   | 26                        | 4                      | 26                   | 6                      |
| Division st...                                   | Cherry st., westward.....           | 50                        | 4                      | 50                   | 8                      |
| Douglas ave...                                   | Emerald ave. to Halsted st.....     | 335                       | 12                     | 335                  | 6                      |
| Erie st.....                                     | Carpenter st. to Center ave.....    | 926                       | 4                      | 926                  | 6                      |
| Ewing st.....                                    | Halsted st. to Blue Island ave...   | 427                       | 4                      | 730                  | 6                      |
| Franklin st...                                   | Chicago ave. to Division st.....    | 2,472                     | 4                      | 2,472                | 6                      |
| Front st.....                                    | Sangamon st. to Elston ave.....     | 1,213                     | 4                      | 1,213                | 6                      |
| Green st.....                                    | Madison st. to Washington st.....   | 450                       | 4                      | 450                  | 6                      |
| Green st.....                                    | Austin ave. to Milwaukee ave.....   | 632                       | 4                      | 632                  | 8                      |
| Haddock pl...                                    | Wabash ave., eastward.....          | 166                       | 6                      | 166                  | 8                      |
| Halsted st.....                                  | Crossing on Douglas ave.....        | 66                        | 6                      | 66                   | 8                      |
| Hurlbut st.....                                  | Webster ave. to Belden ave.....     | 688                       | 6                      | 688                  | 8                      |
| Huron st.....                                    | Crossing on Wood st.....            | 90                        | 4                      | 90                   | 8                      |
| Huron st.....                                    | Crossing on Paulina st.....         | 63                        | 4                      | 63                   | 6                      |
| Huron st.....                                    | Center ave. to Noble st.....        | 1,150                     | 4                      | 1,300                | 8                      |
| Huron st.....                                    | Noble st. to Ashland ave.....       | 1,267                     | 4                      | 1,267                | 8                      |
| Indiana st.....                                  | Ashland ave. to Center ave.....     | 2,620                     | 4                      | 2,620                | 6                      |
| Kingsbury st...                                  | Chicago ave. to Superior st.....    | 368                       | 4                      | 368                  | 8                      |
| Main st.....                                     | Archer ave. to Thirty-first st..... | 2,311                     | 16                     | 2,311                | 24                     |

\*Abandoned.

| STREET.            | PART OF STREET.                     | TAKEN UP OR<br>ABANDONED. |                        | SUBSTIT'D.           |                        |
|--------------------|-------------------------------------|---------------------------|------------------------|----------------------|------------------------|
|                    |                                     | Distance in<br>feet.      | Diameter in<br>inches. | Distance in<br>feet. | Diameter in<br>inches. |
| Mather st. ....    | Halsted st., eastward. ....         | 410                       | 4                      | 410                  | 6                      |
| Milwaukee ave.     | Union st. to Division st. ....      | 4,863                     | 6                      | .....                | .....                  |
|                    |                                     | 2,636                     | 4                      | .....                | .....                  |
| Monroe st. . . .   | State st. to Clark st. ....         | 750                       | 4                      | .....                | .....                  |
| Paulina st. ....   | Warren ave. to Lake st. ....        | 1,058                     | 4                      | 1,058                | 6                      |
| Paulina st. ....   | Lake st. to Walnut st. ....         | 230                       | 4                      | 230                  | 8                      |
| Paulina st. ....   | Indiana st. to Austin ave. ....     | 354                       | 4                      | 354                  | 6                      |
| Quincy st. ....    | La Salle st. to Fifth ave. ....     | 432                       | 6                      | 432                  | 8                      |
| *Quincy st. ....   | Fifth ave. to Franklin st. ....     | 325                       | 4                      | .....                | .....                  |
| Robey st. ....     | Lake st. to Walnut st. ....         | 248                       | 4                      | 248                  | 6                      |
| Sangamon st. . .   | Front st., northward. ....          | 220                       | 4                      | 220                  | 6                      |
| School land. ....  | Monroe st. to School st. ....       | 220                       | 16                     | .....                | .....                  |
| Superior st. ....  | Crossing on Wood st. ....           | 51                        | 4                      | 51                   | 6                      |
| Thirteenth st. . . | Blue Island ave. to Laflin st. .... | 2,454                     | 4                      | 2,454                | 8                      |
| Twenty-sec'd st    | State st. to Dearborn st. ....      | 359                       | 4                      | 359                  | 6                      |
| Van Buren st. . .  | Crossing on Wabash ave. ....        | 106                       | 4                      | 106                  | 8                      |
| Wallace st. ....   | Crossing on Douglas ave. ....       | 45                        | 6                      | 45                   | 8                      |
| Wentworth ave.     | Crossing on Douglas ave. ....       | 45                        | 6                      | 45                   | 8                      |
| Western ave. ....  | Erie st. to Ohio st. ....           | 328                       | 8                      | 328                  | 12                     |
| Western ave. ....  | Augusta st. to Gross parkway. ....  | 985                       | 8                      | 985                  | 12                     |
|                    | Hydrant branches. ....              | 297                       | 4                      | 297                  | 6                      |
|                    | Total taken up or abandoned. ....   | 38,119                    | .....                  | 28,570               | .....                  |

\*Abandoned.



**RECAPITULATION OF PIPE TAKEN UP OR ABANDONED  
DURING 1885.**

| DIVISION. | Length of Pipe<br>in Feet. | Diam. of Pipe<br>in Inches. | Length of Pipe<br>in Feet. | Diam. of Pipe<br>in Inches. | Length of Pipe<br>in Feet. | Diam. of Pipe<br>in Inches. | Length of Pipe<br>in Feet. | Diam. of Pipe<br>in Inches. | Length of Pipe<br>in Feet. | Diam. of Pipe<br>in Inches. | Total in Feet. |
|-----------|----------------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|----------------------------|-----------------------------|----------------|
| North ..  | 3,983                      | 4                           | 688                        | 6                           | .....                      | .....                       | .....                      | .....                       | .....                      | .....                       | 4,671          |
| South ..  | 2,565                      | 4                           | 844                        | 6                           | .....                      | .....                       | 335                        | 12                          | 2,311                      | 16                          | 6,055          |
| West...   | 20,492                     | 4                           | 5,118                      | 6                           | 1,568                      | 8                           | .....                      | .....                       | 220                        | 16                          | 27,393         |
| Total...  | 27,040                     | 4                           | 6,645                      | 6                           | 1,568                      | 8                           | 335                        | 12                          | 2,531                      | 16                          | 38,119         |

TABLE SHOWING AMOUNT OF PIPE IN USE IN THE CITY, AT THE CLOSE OF 1885.

| DIAMETER<br>OF PIPE. | 1884.                     | 1885.                      |  |  |   |
|----------------------|---------------------------|----------------------------|--|--|---|
|                      | Amount in<br>Feet in use. | Amount<br>Laid in<br>Feet. | Am't Taken<br>up or<br>Abandoned<br>in Feet. | Grand Total<br>in Feet, in<br>use at end of<br>1885. | Grand Total<br>in Miles, in<br>use at end of<br>1885. |
| 36 inch.....         | 41,174                    | .....                      | .....  | 41,174   | 7 $\frac{41174}{5280}$                                |
| 30 inch.....         | 39                        | .....                      | .....  | 39   | 0 $\frac{39}{5280}$                                   |
| 28 inch. ....        | 160                       | .....                      | .....  | 160  | 0 $\frac{160}{5280}$                                  |
| *24 inch.....        | *80,280                   | 10,665                     | .....  | 90,895   | 17 $\frac{90895}{5280}$                               |
| 16 inch.....         | 68,143                    | 15,686                     | 2,531  | 81,298   | 15 $\frac{81298}{5280}$                               |
| 12 inch.....         | 158,664                   | 9,644                      | 335  | 167,973  | 31 $\frac{167973}{5280}$                              |
| 10 inch.....         | 8,012                     | .....                      | .....  | 8,012  | 1 $\frac{8012}{5280}$                                 |
| 8 inch.....          | 570,149                   | 23,724                     | 1,568  | 592,305  | 112 $\frac{592305}{5280}$                             |
| 6 inch.....          | 1,176,369                 | 75,564                     | 6,645  | 1,245,288  | 235 $\frac{1245288}{5280}$                            |
| 4 inch.....          | 750,385                   | 17,863                     | 27,040                                       | 741,208  | 140 $\frac{741208}{5280}$                             |
| 3 inch.....          | 15,637                    | .....                      | .....  | 15,637   | 2 $\frac{15637}{5280}$                                |
| Total in feet.       | 2,868,962                 | 153,146                    | 38,119                                       | 2,983,989  | 565 $\frac{2983989}{5280}$                            |
| Total in miles       | 543 $\frac{18822}{5280}$  | 29 $\frac{275}{5280}$      | 7 $\frac{113}{5280}$                         | 565 $\frac{782}{5280}$                               | 565 $\frac{782}{5280}$                                |

\*This amount includes 258 feet of wrought iron syphon pipe at Twelfth street.

The following tables show the number, size and location of stop valves put in during the year, the number and size of those previously put in, and the number and size of those in use by the city at the end of 1885:

## NORTH DIVISION.

| LINE OF PIPE.   | LOCATION.                                  | SIZE OF VALVES. |     |     |     |     |     |     |
|---|--|-----------------|-----|-----|-----|-----|-----|-----|
|   |  | 4"              | 6"  | 8"  | 12" | 16" | 24" | 36" |
| Alley E. of Clark st.   | North line of Oak st.                      |                 |     |     |     | 1   |     |     |
| Alley E. of Clark st.   | Intersection of Oak st.                    |                 |     |     |     |     | 1   |     |
| Astor st.   | North line of Schiller st.                 |                 | 1   |     |     |     |     |     |
| *Belden av.   | West line of Hurlbut st.                   |                 |     | 1   |     |     |     |     |
| †Belden av.   | West line of Larrabee st.                  |                 | 1   |     |     |     |     |     |
| Belden pl.  | North line of Belden av.                   |                 | 1   |     |     |     |     |     |
| Bissell st.   | North line of Webster av.                  |                 | 1   |     |     |     |     |     |
| Center st.  | West line of Sheffield av.                 |                 | 1   |     |     |     |     |     |
| Center st.  | East line of Racine av.                    |                 | 1   |     |     |     |     |     |
| Cherry st.  | North line of Blackhawk st.                |                 |     | 1   |     |     |     |     |
| Chicago av.   | Water Works shops (fire cistern)           |                 | 1   |     |     |     |     |     |
| Clark st.   | North line of Center st.                   |                 |     |     | 1   |     |     |     |
| Clark st.   | Intersec. of Cent. st. bet. 16" & 8" mains |                 |     | 1   |     |     |     |     |
| Clark st.   | North line of Webster av.                  |                 |     |     | 1   |     |     |     |
| Clark st.   | Intersect'n of Webster av. (blew off)      |                 | 1   |     |     |     |     |     |
| Clark st.   | Intersect'n of Webster av. (feeder)        |                 |     | 1   |     |     |     |     |
| Clark st.   | S. line of North av. (blew off)            |                 | 1   |     |     |     |     |     |
| Clark st.   | S. line off North av. (8" a feeder)        |                 |     | 1   |     | 1   |     |     |
| Clybourn pl.  | Intersect'n of Southport av. (blew off)    |                 | 1   |     |     |     |     |     |
| Clybourn pl.  | W. line of Clybourn av.                    |                 | 1   |     |     |     |     |     |
| Division st.  | West line of Hickory av.                   |                 |     | 1   |     |     |     |     |
| Division st.  | East line of Clark st.                     |                 |     |     |     | 1   |     |     |
| Division st.  | Intersection of Clark st. (blew off)       |                 | 2   |     |     |     |     |     |
| Edward st.  | North line of Garfield av.                 |                 | 1   |     |     |     |     |     |
| Elm st.   | West line of La Salle av.                  |                 | 1   |     |     |     |     |     |
| †Franklin st.   | North line of Oak st.                      |                 | 1   |     |     |     |     |     |
| Franklin st.  | South line of Locust st.                   |                 | 1   |     |     |     |     |     |
| Hobbie st.  | West line of Milton av.                    |                 | 1   |     |     |     |     |     |
| *Hurlbut st.  | North line of Belden av.                   |                 |     | 1   |     |     |     |     |
| Jay st.   | North line of Center st.                   |                 | 1   |     |     |     |     |     |
| †Kingsbury st.  | South line of Chicago av.                  |                 |     | 1   |     |     |     |     |
| Menomonee st.   | East side of Clark st.                     |                 |     | 1   |     |     |     |     |
| Pearson st.   | Near Water Works.                          |                 | 1   |     |     |     |     |     |
| Seminary av.  | South line of Webster av.                  |                 | 1   |     |     |     |     |     |
| Seminary av.  | S. line of Fullerton av.                   |                 | 1   |     |     |     |     |     |
| Seminary av.  | North line of Belden av.                   |                 | 1   |     |     |     |     |     |
| Sheffield av.   | South line of Webster av.                  |                 |     | 1   |     |     |     |     |
| Sheffield av.   | North line of Belden av.                   |                 |     | 1   |     |     |     |     |
| Total in North Division.  |  | 4               | 19  | 11  | 2   | 3   | 1   |     |
| Previously put in.  |  | 176             | 317 | 242 | 28  | 9   | 8   | 1   |
| Total.  |  | 180             | 336 | 253 | 30  | 12  | 9   | 1   |
| Less by valves taken out and re-<br>placed by others of different size. |  | 3               | 2   |     |     |     |     |     |
| Grand total in North Division.  |  | 177             | 334 | 253 | 30  | 12  | 9   | 1   |

\*In place of 6 inch.

†In place of 4 inch.



## SOUTH DIVISION.

| LINE OF<br>PIPE.   | LOCATION.                                 | SIZE OF VALVES. |     |     |     |     |     |     |
|--|---|-----------------|-----|-----|-----|-----|-----|-----|
|  |   | 4"              | 6"  | 8"  | 12" | 16" | 24" | 36" |
| Adams st....   | Intersection Wabash av. (fire cistern)    | ...             | 1   | ... | ... | ... | ... | ... |
| Alley S. of Doug av.   | West line of Vincennes av.                | 1               | ... | ... | ... | ... | ... | ... |
| *Alley E. of Wab. av.  | North line of Lake st....                 | ...             | ... | 1   | ... | ... | ... | ... |
| Arch st....  | South line of Archer av....               | 1               | ... | ... | ... | ... | ... | ... |
| Beers st....   | North line of 37th st....                 | ...             | ... | ... | 1   | ... | ... | ... |
| Butler st....  | North line of 37th st....                 | ...             | 1   | ... | ... | ... | ... | ... |
| Butterfield st   | North line of Douglas av....              | 1               | ... | ... | ... | ... | ... | ... |
| Dashiel st....   | North line of Douglas av....              | ...             | ... | 1   | ... | ... | ... | ... |
| †Dashiel st....  | South line of Douglas av....              | ...             | ... | 1   | ... | ... | ... | ... |
| Dearborn st.   | S. line of Van Buren st....               | ...             | ... | 1   | ... | ... | ... | ... |
| Dearborn st.   | South line of Harrison st....             | ...             | ... | 1   | ... | ... | ... | ... |
| Dearborn st.   | Intersection Wash. st. (fire cistern)     | ...             | 1   | ... | ... | ... | ... | ... |
| Douglas av..   | West line of State st. (6" blew off)      | ...             | 1   | 1   | ... | ... | ... | ... |
| Douglas av..   | East line of Halsted st....               | ...             | 1   | ... | ... | ... | ... | ... |
| Douglas av..   | East line of Wallace st....               | ...             | ... | 1   | ... | ... | ... | ... |
| Douglas av..   | West line of Stewart av. (6" blew off)    | ...             | 1   | ... | ... | 1   | ... | ... |
| Douglas av..   | W. line of Wentworth av....               | ...             | ... | 1   | ... | ... | ... | ... |
| Egan av....  | East line of Michigan av....              | 1               | ... | ... | ... | ... | ... | ... |
| Fox st....   | South line of Thirty-first st             | ...             | 1   | ... | ... | ... | ... | ... |
| *Halsted st..  | N. & S. lines of Douglas av               | ...             | ... | 2   | ... | ... | ... | ... |
| Harrison av.   | Intersection of Wab. av. (fire cistern)   | ...             | 1   | ... | ... | ... | ... | ... |
| James av....   | West line of Laurel st....                | ...             | 1   | ... | ... | ... | ... | ... |
| Laurel st....  | South line of Thirty-first st             | ...             | ... | ... | ... | ... | 1   | ... |
| Laurel st....  | North line of Douglas av....              | ...             | ... | ... | ... | 1   | ... | ... |
| Laurel st....  | S. line of 34th st. (blew off)            | ...             | 1   | ... | ... | ... | ... | ... |
| *Main st....   | South line of Archer av....               | ...             | ... | ... | ... | ... | 1   | ... |
| Michigan av.   | North line of Egan av....                 | ...             | 1   | ... | ... | ... | ... | ... |
| Monroe st....  | Intersection of Market st. (fire cistern) | ...             | 1   | ... | ... | ... | ... | ... |
| Monroe st....  | Intersect'n of Dearb'n st. (fire cistern) | ...             | 1   | ... | ... | ... | ... | ... |
| Mospratt st..  | South line of Thirty-first st             | ...             | 1   | ... | ... | ... | ... | ... |
| Oakley av....  | North line of Archer av....               | ...             | 1   | ... | ... | ... | ... | ... |
| †Quincy st....   | East line of Fifth ave....                | ...             | ... | 1   | ... | ... | ... | ... |
| Quincy st....  | Intersect'n of LaSalle st. (fire cistern) | ...             | 1   | ... | ... | ... | ... | ... |
| Stewart av..   | South line of Archer av....               | ...             | ... | 1   | ... | ... | ... | ... |
| Thirty-first st.   | East line of Main st....                  | ...             | ... | ... | 1   | ... | ... | ... |
| Thirty-second st..   | West line of Laurel st....                | ...             | 1   | ... | ... | ... | ... | ... |
| Thirty-third st..  | West line of Halsted st....               | 1               | ... | ... | ... | ... | ... | ... |
| Van Buren st.  | Intersection of Wabash av. (fire cistern) | ...             | 1   | ... | ... | ... | ... | ... |
| Wallace st....   | North line of Egan av....                 | ...             | ... | 1   | ... | ... | ... | ... |
| Wallace st....   | North line of Douglas av....              | ...             | ... | 1   | ... | ... | ... | ... |
| *Wallace st..  | South line of Douglas av....              | ...             | ... | 1   | ... | ... | ... | ... |
| *Wentworth av..  | South line of Douglas av....              | ...             | ... | 1   | ... | ... | ... | ... |
| Wentworth av..   | North line of Douglas av....              | ...             | ... | 1   | ... | ... | ... | ... |
| Total in South Division  |   | 5               | 18  | 17  | 2   | 2   | 2   | ... |
| Previously put in.   |   | 143             | 427 | 531 | 62  | 16  | 11  | 4   |
| Total  |   | 148             | 445 | 548 | 64  | 18  | 13  | 4   |
| Less by hydrants taken out and re-<br>placed by others of different size.. } |   | 2               | 4   | ... | ... | 1   | ... | ... |
| Total in South Division  |   | 146             | 441 | 548 | 64  | 17  | 13  | 4   |

\*In place of 6-inch.

†In place of 16-inch.

‡In place of 4-inch.



## WEST DIVISION.

| LINE OF<br>PIPE.       | LOCATION.                            | SIZE OF VALVES. |     |     |     |     |     |     |
|------------------------|--------------------------------------|-----------------|-----|-----|-----|-----|-----|-----|
|                        |                                      | 4"              | 6"  | 8"  | 12" | 16" | 24" | 36" |
| Alley S. of Chicago av | West line of May st. ....            | 1               | ... | ... | ... | ... | ... | ... |
| Armitage av.           | East line of Western av. .           | 1               | ... | ... | ... | ... | ... | ... |
| Armitage av.           | West line of Paulina st. .           | 1               | ... | ... | ... | ... | ... | ... |
| Armitage av.           | West line of Robey st. ....          | 2               | ... | ... | ... | ... | ... | ... |
| Armour st. .           | North line of Huron st. ....         | ...             | 1   | ... | ... | ... | ... | ... |
| Augusta st. .          | West line of Western av. .           | ...             | ... | 1   | ... | ... | ... | ... |
| *Austin av. .          | West line of Morgan st. .            | ...             | 1   | ... | ... | ... | ... | ... |
| Ashland av. .          | South line of 22d st. . . .          | ...             | 1   | ... | ... | ... | ... | ... |
| Bickerdike st          | North line of Huron st. ....         | ...             | 1   | ... | ... | ... | ... | ... |
| California av          | South line of Van Buren st.          | ...             | ... | ... | 1   | ... | ... | ... |
| California av          | South line of Taylor st. ....        | ...             | 1   | ... | ... | ... | ... | ... |
| Chicago av. .          | West line of Wood st. ....           | ...             | 1   | ... | ... | ... | ... | ... |
| Chicago av. .          | West line of Hoyne av. (6" blew off) | ...             | 1   | ... | ... | 1   | ... | ... |
| Chicago av. .          | E. line of Milwaukee av. .           | ...             | 1   | ... | ... | ... | ... | ... |
| Cicero ct. ....        | South line of Van Buren st.          | 1               | ... | ... | ... | ... | ... | ... |
| Clybourn pl. .         | West line of Ashland av. .           | ...             | 1   | ... | ... | ... | ... | ... |
| Clybourn pl. .         | W. line of Elston av. (blew off)     | ...             | 1   | ... | ... | ... | ... | ... |
| Coblentz st. .         | West line of Robey st. ....          | ...             | 1   | ... | ... | ... | ... | ... |
| Coblentz st. .         | West line of Leavitt st. ....        | ...             | 1   | ... | ... | ... | ... | ... |
| Colorado av. .         | W. line of Sacramento av. .          | ...             | ... | 1   | ... | ... | ... | ... |
| Congress st. .         | W. line of California av. .          | ...             | 1   | ... | ... | ... | ... | ... |
| *Cornelia. ....        | S. line of Milwaukee av. .           | ...             | ... | 1   | ... | ... | ... | ... |
| Coulter st. .          | West line of Robey st. ....          | ...             | 1   | ... | ... | ... | ... | ... |
| Curtis st. ....        | East line of May st. ....            | 1               | ... | ... | ... | ... | ... | ... |
| *Curtis st. ....       | North line of Kinzie st. .           | ...             | ... | 1   | ... | ... | ... | ... |
| *Curtis st. ....       | South line of Indiana st. .          | ...             | ... | 1   | ... | ... | ... | ... |
| Cypress st. .          | South line of Taylor st. ....        | ...             | 1   | ... | ... | ... | ... | ... |
| Crystal st. .          | West line of Robey st. ....          | 1               | ... | ... | ... | ... | ... | ... |
| Dudley st. ....        | South line of Clybourn pl. .         | ...             | 1   | ... | ... | ... | ... | ... |
| Emerson av. .          | West line of Robey st. ....          | ...             | 1   | ... | ... | ... | ... | ... |
| *Erie st. ....         | West line of Curtis st. ....         | ...             | 1   | ... | ... | ... | ... | ... |
| Fairfield av. .        | South line of Taylor st. ....        | ...             | 1   | ... | ... | ... | ... | ... |
| Fillmore st. .         | West line of California av. .        | ...             | 1   | ... | ... | ... | ... | ... |
| Francisco st. .        | North line of Washington boulevard   | ...             | 1   | ... | ... | ... | ... | ... |
| *Front st. . .         | W. line of Carpenter st. .           | ...             | 1   | ... | ... | ... | ... | ... |
| Genesee av. .          | South line of 32d st. ....           | ...             | 1   | ... | ... | ... | ... | ... |
| George st. ....        | West line of Carpenter st. .         | 1               | ... | ... | ... | ... | ... | ... |
| *Green st. ....        | North line of Madison st. .          | ...             | 1   | ... | ... | ... | ... | ... |
| Green st. ....         | South line of Indiana st. .          | ...             | ... | 1   | ... | ... | ... | ... |
| Halsted st. .          | South line of Harrison st. .         | ...             | 1   | ... | ... | ... | ... | ... |
| Harvard st. .          | West line of California av. .        | ...             | 1   | ... | ... | ... | ... | ... |
| Hastings st. .         | West line of Robey st. ....          | ...             | 1   | ... | ... | ... | ... | ... |
| Hermitage av           | South line of Taylor st. ....        | ...             | 1   | ... | ... | ... | ... | ... |
| Homan av. . .          | N. line of Washington st. .          | ...             | ... | 1   | ... | ... | ... | ... |
| Homer st. . .          | West line of Leavitt st. ....        | ...             | 1   | ... | ... | ... | ... | ... |
| Hoyne av. . .          | South line of Moore st. . .          | ...             | 1   | ... | ... | ... | ... | ... |
| Huron st. . .          | West line of Center av. . .          | ...             | ... | 1   | ... | ... | ... | ... |
| *Huron st. . .         | East line of Noble st. ....          | ...             | ... | 1   | ... | ... | ... | ... |
| *Huron st. . .         | West line of Noble st. ....          | ...             | ... | 1   | ... | ... | ... | ... |
| *Huron st. . .         | West line of Wood st. ....           | ...             | ... | 1   | ... | ... | ... | ... |

\*In place of 4-inch.

## WEST DIVISION—CONTINUED.

| LINE OF<br>PIPE.   | LOCATION.                                 | SIZE OF VALVES. |    |    |     |     |     |     |
|--------------------|---|-----------------|----|----|-----|-----|-----|-----|
|                    |   | 4"              | 6" | 8" | 12" | 16" | 24" | 36" |
| *Indiana st..      | West line of Noble st.....                |                 | 1  |    |     |     |     |     |
| Indiana st...      | West line of Paulina st.....              |                 | 1  |    |     |     |     |     |
| *Indiana st..      | West line of Elizabeth st.....            |                 | 1  |    |     |     |     |     |
| *Indiana st..      | West line of Center av.....               |                 | 1  |    |     |     |     |     |
| Keenan st...       | West line of Paulina st.....              | 1               |    |    |     |     |     |     |
| Keith st.....      | North line of Huron st.....               | 1               |    |    |     |     |     |     |
| Leavitt st...      | Intersection of Chicago av. (feeder)...   |                 | 1  |    |     |     |     |     |
| Leavitt st...      | N. and S. lines of 21st st.....           |                 |    | 2  |     |     |     |     |
| Leavitt st...      | N. line of Armitage road.....             |                 |    | 1  |     |     |     |     |
| Leavitt st...      | North and south lines of Division st..... |                 |    | 2  |     |     |     |     |
| Leavitt st...      | Intersection of Division st. (feeder)...  |                 |    | 1  |     |     |     |     |
| Lubeck st...       | West line of Leavitt st.....              |                 | 1  |    |     |     |     |     |
| Lydia st.....      | East line of Halsted st.....              |                 | 1  |    |     |     |     |     |
| McKernolds st...   | West line of Paulina st.....              |                 | 1  |    |     |     |     |     |
| Madison st..       | W. line of Sacramento av.....             |                 |    | 1  |     |     |     |     |
| Mark st.....       | North line of Huron st.....               | 1               |    |    |     |     |     |     |
| May st.....        | North line of Indiana st.....             |                 | 1  |    |     |     |     |     |
| Milwaukee av....   | North line of Huron st.....               | 1               |    |    |     |     |     |     |
| Moore st.....      | West line of Robey st.....                |                 | 1  |    |     |     |     |     |
| Morgan st...       | S. line of Milwaukee av.....              |                 |    | 1  |     |     |     |     |
| Newton st...       | North line of Augusta st.....             | 1               |    |    |     |     |     |     |
| Nineteenth st...   | West line of Kedzie av.....               | 1               |    |    |     |     |     |     |
| *Paulina st..      | North line of Park av.....                |                 | 1  |    |     |     |     |     |
| Paulina st...      | North line of Huron st.....               |                 | 1  |    |     |     |     |     |
| Paulina st...      | N. line of Milwaukee av.....              |                 | 1  |    |     |     |     |     |
| Rebecca st...      | Intersection of Loomis st. (blow off)...  |                 | 1  |    |     |     |     |     |
| Robey st.....      | S. line of Fourteenth st.....             |                 | 1  |    |     |     |     |     |
| Rockwell st...     | North line of Ogden av.....               | 1               |    |    |     |     |     |     |
| Rundall pl...      | West line of Morgan st.....               | 1               |    |    |     |     |     |     |
| Sacramento av....  | South line of Madison st.....             |                 |    | 1  |     |     |     |     |
| Sawyer av....      | South line of Ogden av.....               |                 | 1  |    |     |     |     |     |
| Seventeenth st...  | West line of Wood st.....                 |                 | 1  |    |     |     |     |     |
| Shober st...       | South line of Hirsch st.....              |                 | 1  |    |     |     |     |     |
| Sibley st.....     | North line of Gilpin pl.....              |                 | 1  |    |     |     |     |     |
| Snell st.....      | North line of Huron st.....               | 1               |    |    |     |     |     |     |
| Taylor st...       | W. line of California av.....             | 1               |    |    |     |     |     |     |
| Temple st...       | North line of Huron st.....               |                 | 1  |    |     |     |     |     |
| Thirteenth st...   | East and west lines of Throop st.....     |                 |    | 2  |     |     |     |     |
| Thirteenth st...   | West line of Loomis st.....               |                 |    | 1  |     |     |     |     |
| Twenty-first st... | West line of Kedzie av.....               | 1               |    |    |     |     |     |     |
| Twenty-first st... | East line of Leavitt st.....              |                 | 1  |    |     |     |     |     |
| Twenty-first st... | West line of Robey st. (6" blow off)...   |                 | 2  |    |     |     | 1   |     |
| Warren av....      | W. line of Sacramento av.....             |                 | 1  |    |     |     |     |     |
| Warren av....      | W. line of California av.....             |                 | 1  |    |     |     |     |     |
| Washienaw av....   | North line of Lake st.....                |                 |    | 1  |     |     |     |     |
| Washienaw av....   | S. line of Fulton st.....                 |                 |    | 1  |     |     |     |     |
| Western av....     | North line of Lake st.....                |                 |    |    | 1   |     |     |     |
| Western av....     | North and south lines of Madison st.....  |                 |    |    | 2   |     |     |     |
| Western av....     | North and south lines of Chicago av.....  |                 |    |    | 2   |     |     |     |
| *Western av..      | North line of Ohio st.....                |                 |    |    | 1   |     |     |     |
| *Western av..      | North line of Augusta st.....             |                 |    |    | 1   |     |     |     |

\*In place of 4-inch.

## WEST DIVISION—CONTINUED.

| LINE OF PIPE.  | LOCATION.                                 | SIZE OF VALVES. |      |      |      |      |      |      |
|--|---|-----------------|------|------|------|------|------|------|
|  |   | 4"              | 6"   | 8"   | 12"  | 16"  | 24"  | 36"  |
| Western av..   | N. and S. lines of Div. st. (6" blew off) | ....            | 1    | .... | 2    | .... | .... | .... |
| Western av..   | Intersection of Division st. (feeder)...  | ....            | .... | .... | .... | .... | .... | .... |
| Western av..   | N. line of Twenty-first st..              | 1               | .... | 1    | .... | .... | .... | .... |
| Total in West Division.....  |   | 22              | 56   | 25   | 11   | 1    | 1    | .... |
| Previously put in.....   |   | 506             | 833  | 572  | 74   | 37   | 20   | 5    |
| Total.....   |   | 528             | 889  | 597  | 85   | 38   | 21   | 5    |
| Less by valves taken out and re-<br>placed by others of different size.. } |   | 14              | .... | 2    | .... | .... | .... | .... |
| Grand total in West Division.....  |   | 514             | 889  | 595  | 85   | 38   | 21   | 5    |



## RECAPITULATION

OF STOP VALVES PUT IN DURING 1885.

| DIVISION.   | SIZE OF VALVES. |    |    |     |     |     |       | TOTAL. |
|-------------|-----------------|----|----|-----|-----|-----|-------|--------|
|             | 4"              | 6" | 8" | 12" | 16" | 24" | 36"   |        |
| North ..... | 4               | 19 | 11 | 2   | 3   | 1   | ..... | 40     |
| South.....  | 5               | 18 | 17 | 2   | 2   | 2   | ..... | 46     |
| West.....   | 22              | 56 | 25 | 11  | 1   | 1   | ..... | 116    |
| Total.....  | 31              | 93 | 53 | 15  | 6   | 4   | ..... | 202    |

Whole number put in during 1885..... 202

Whole number removed and replaced during 1886 28

Net increase in 1885..... 174

NUMBER AND SIZE OF VALVES IN USE BY THE CITY AT  
THE END OF 1885.

| DIVISION.    | SIZE OF VALVES. |      |      |     |     |     |     | TOTAL. |
|--------------|-----------------|------|------|-----|-----|-----|-----|--------|
|              | 4"              | 6"   | 8"   | 12" | 16" | 24" | 36" |        |
| North . .... | 177             | 334  | 253  | 30  | 12  | 9   | 1   | 816    |
| South.....   | 146             | 441  | 548  | 64  | 17  | 13  | 4   | 1233   |
| West.....    | 514             | 889  | 595  | 85  | 38  | 21  | 5   | 2147   |
| Total.....   | 837             | 1664 | 1396 | 179 | 67  | 43  | 10  | 4196   |



The following statement shows in detail the number, size and location of the hydrants added to the system during the year and the number in use in the city at the end of 1885:

## NORTH DIVISION.

| LOCATION.    | STREET.   | Size of Hydr'ts.  |                    |                    |
|--------------|---|-------------------|--------------------|--------------------|
|              |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| S. W. cor... | Alley E. of Clark street, at Maple street.....      | 1                 |                    |                    |
| *N. W. cor.  | Astor and Schiller streets.....                     | 1                 |                    |                    |
| *N. E. cor.. | Belden avenue and Hurlbut st.....                   | 1                 |                    |                    |
| *N. W. cor.  | Belden avenue and Belden place.....                 | 1                 |                    |                    |
| *S. W. cor.. | Belden avenue and Larrabee street.....              | 1                 |                    |                    |
| North side.. | Belden ave. bet. Lincoln ave. and Larrabee st.....  | 1                 |                    |                    |
| North side.. | Belden place, at end of pipe.....                   |                   | 1                  |                    |
| S. W. cor... | Bissell street and Belden avenue.....               | 1                 |                    |                    |
| West side... | Bissell street, bet. Webster and Belden ave's.....  | 1                 |                    |                    |
| West side... | Cherry street, opposite Weed street.....            | 1                 |                    |                    |
| West side... | Cherry street, 250 feet N. of Blackhawk street..... | 1                 |                    |                    |
| East side... | Clark street, bet. Division and Goethe streets..... | 1                 |                    |                    |
| East side... | Clark street, bet. Schiller and Goethe streets..... | 1                 |                    |                    |
| East side... | Clark street, bet. Burton place and Goethe st.....  | 1                 |                    |                    |
| S. E. cor... | Clark and Grant streets.....                        | 1                 |                    |                    |
| †S. E. cor.. | Clark and Goethe streets.....                       | 1                 |                    |                    |
| East side... | Clark street, 158 feet N. of North avenue.....      | 1                 |                    |                    |
| East side... | Clark st., bet. Webster and Garfield avenues.....   | 1                 |                    |                    |
| †West side.. | Clark st., bet. Michigan and Kinzie streets.....    | 1                 |                    |                    |
| North side.. | Division street, on the island and near canal.....  |                   | 1                  |                    |
| N. W. cor..  | Division and Hooker streets.....                    | 1                 |                    |                    |
| N. W. cor..  | Division and Cherry streets.....                    | 1                 |                    |                    |
| North side.. | Division street, on the island and near river.....  |                   | 1                  |                    |
| N. W. cor..  | Franklin and Wendell streets.....                   | 1                 |                    |                    |
| *N. E. cor.. | Garfield avenue and Burling street.....             | 1                 |                    |                    |
| North side.. | Hobbie street, bet. Larrabee and Wesson sts.....    | 1                 |                    |                    |
| West side... | Hurlbut st., bet. Belden and Fullerton ave's.....   | 1                 |                    |                    |
| West side... | Hurlbut st., bet. Lincoln ave. and Center st.....   | 1                 |                    |                    |
| West side... | Hurlbut st., bet. Center and Wisconsin sts.....     | 1                 |                    |                    |
| *N. W. cor.  | Hurlbut and Wisconsin streets.....                  | 1                 |                    |                    |
| West side... | Hurlbut st., bet. Menominee and Wisconsin sts.....  | 1                 |                    |                    |
| West side... | Hurlbut st., bet. Menominee and Eugenie sts.....    | 1                 |                    |                    |
| N. W. cor..  | Illinois and State streets.....                     | 1                 |                    |                    |
| West side... | Jay street, 300 feet S. of Garfield avenue.....     |                   | 1                  |                    |
| N. W. cor..  | Jay street and Garfield avenue.....                 | 1                 |                    |                    |
| N. W. cor..  | Kingsbury and Superior streets.....                 | 1                 |                    |                    |
| N. W. cor..  | La Salle avenue and Superior street.....            | 1                 |                    |                    |
| North side.. | Ohio street, 235 feet E. of St. Clair street.....   |                   | 1                  |                    |
| North side.. | Pearson st., at end of pipe W. of Market st.....    |                   | 1                  |                    |
| N. E. cor... | Schiller street and Lake shore drive.....           |                   | 1                  |                    |
| West side... | Sedgwick st., bet. Garfield ave. and Center st..... |                   | 1                  |                    |
| West side... | Sedgwick st., bet. Garfield and Webster ave's.....  |                   | 1                  |                    |

\* In place of single.

† In place of 4-inch double.

## NORTH DIVISION.—CONTINUED.

| LOCATION.   | STREET.  | Size of Hydr'ts.  |                    |                    |
|---|--|-------------------|--------------------|--------------------|
|   |  | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| S. W. cor...  | Sedgwick street and Belden avenue.....           |                   | 1                  | ...                |
| West side...  | Seminary ave., 275 feet N. of Center street...   |                   | 1                  | ...                |
| S. W. cor...  | Seminary and Fullerton avenues.....              |                   | 1                  | ...                |
| West side...  | Seminary ave., bet. Fullerton and Belden ave's.  |                   | 1                  | ...                |
| S. W. cor...  | Seminary and Belden avenues.....                 |                   | 1                  | ...                |
| West side...  | Seminary ave., 300 feet N. of Webster ave.       |                   |                    | 1                  |
| West side...  | Sheffield ave., bet Center st. and Garfield ave. |                   | 1                  | ...                |
| S. W. cor...  | Sheffield and Garfield avenues.....              |                   | 1                  | ...                |
| West side...  | Sheffield ave., bet. Webster and Garfield ave's. |                   | 1                  | ...                |
| N. W. cor...  | Sheffield and Belden avenues.....                |                   | 1                  | ...                |
| West side...  | Sheffield avenue, 300 feet N. of Belden ave.     |                   | 1                  | ...                |
| North side..  | Sigel street, bet. Sedgwick and Franklin sts.    |                   |                    | 1                  |
| S. W. cor...  | Wells and Ontario streets.....                   | 1                 |                    | ...                |
| Total in North Division.....  |  | 7                 | 34                 | 14                 |
| Previously put in.....  |  | 121               | 261                | 440                |
| Total .....   |  | 128               | 295                | 454                |
| Less by hydrants taken out and replaced by<br>others of different size..... |  | 2                 | ...                | 6                  |
| Total in use in North Division.....   |  | 126               | 295                | 448                |



## SOUTH DIVISION.

| LOCATION.     | STREET.   | Size of Hydr'ts.  |                    |                    |
|---------------|---|-------------------|--------------------|--------------------|
|               |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| South side..  | Alley S. of Groveland Park, in I. C. R. R. wall                 | .....             | .....              | 1                  |
| North side..  | Alley S. of Douglas avenue, 270 feet W. of Vincennes avenue     | .....             | .....              | 1                  |
| East side...  | Arch street, 400 feet S. of Archer avenue                       | .....             | .....              | 1                  |
| S. W. cor...  | Archer avenue and La Salle street                               | .....             | 1                  | .....              |
| N. E. cor...  | Archer avenue and Purple street                                 | .....             | 1                  | .....              |
| S. W. cor...  | Archer and Portland avenues                                     | .....             | 1                  | .....              |
| *S. W. cor... | Archer avenue and Wallace street                                | .....             | 1                  | .....              |
| N. E. cor...  | Archer and Stewart avenues                                      | .....             | 1                  | .....              |
| N. W. cor...  | Archer avenue and McGlashan street                              | .....             | 1                  | .....              |
| S. E. cor...  | Archer avenue and McGregor street                               | .....             | 1                  | .....              |
| S. E. cor...  | Archer avenue and Bushnell street                               | .....             | 1                  | .....              |
| North side..  | Archer avenue, 110 feet N. of Hanover street                    | .....             | 1                  | .....              |
| N. W. cor...  | Beers street and Egan avenue                                    | .....             | 1                  | .....              |
| West side...  | Beers street, 300 feet S. of Thirty-sixth street                | .....             | 1                  | .....              |
| N. W. cor...  | Beers and Thirty-seventh streets                                | .....             | 1                  | .....              |
| West side...  | Beers street, 300 feet N. of Thirty-eighth st.                  | .....             | 1                  | .....              |
| S. W. cor...  | Butler and Thirty-sixth streets                                 | .....             | 1                  | .....              |
| West side...  | Butler street, 300 feet S. of Thirty-seventh st.                | .....             | 1                  | .....              |
| East side...  | Butterfield street, 300 feet N. of Douglas ave.                 | .....             | .....              | 1                  |
| S. E. cor...  | Butterfield and Thirty-fourth streets                           | .....             | .....              | 1                  |
| N. W. cor...  | Dearborn and Polk streets                                       | .....             | 1                  | .....              |
| West side...  | Dearborn street, 250 feet N. of Polk street                     | .....             | 1                  | .....              |
| West side...  | Dearborn street, 250 feet N. of Harrison st.                    | .....             | 1                  | .....              |
| West side...  | Dearborn street, 260 feet S. of Harrison st.                    | .....             | 1                  | .....              |
| West side...  | Dearborn street, 260 feet S. of Van Buren st.                   | .....             | 1                  | .....              |
| S. W. cor...  | Dearborn and Van Buren streets                                  | .....             | 1                  | .....              |
| S. W. cor...  | Dearborn and Jackson streets                                    | .....             | 1                  | .....              |
| West side...  | Dearborn street, between Douglas avenue and Thirty-sixth street | .....             | 1                  | .....              |
| West side...  | Dearborn st., 300 feet N. of Thirty-fourth st.                  | .....             | .....              | 1                  |
| West side...  | Dearborn st., 287 feet N. of Thirty-seventh st.                 | .....             | 1                  | .....              |
| West side...  | Dearborn street, 290 feet N. of Douglas ave.                    | .....             | 1                  | .....              |
| West side...  | Dearborn st., 300 feet S. of Thirty-seventh st.                 | .....             | 1                  | .....              |
| West side...  | Dearborn street, 300 feet N. of Egan avenue                     | .....             | 1                  | .....              |
| S. W. cor...  | Douglas avenue and State street                                 | .....             | 1                  | .....              |
| S. E. cor...  | Douglas avenue and Halsted street                               | .....             | 1                  | .....              |
| N. W. cor...  | Egan and Parnell avenues  | .....             | .....              | 1                  |
| N. W. cor...  | Egan avenue and Butler street                                   | .....             | .....              | 1                  |
| North side..  | Egan avenue, 324 feet E. of Butler street                       | .....             | .....              | 1                  |
| N. W. cor...  | Egan and Prairie avenues  | .....             | 1                  | .....              |
| S. W. cor...  | Laurel street and Thirty-fourth court                           | .....             | 1                  | .....              |
| West side...  | Main street, 282 feet N. of Cologne street                      | .....             | 1                  | .....              |
| S. W. cor...  | Mospratt and Thirty-first streets                               | .....             | 1                  | .....              |
| N. W. cor...  | Mospratt and Thirty-second streets                              | .....             | 1                  | .....              |
| N. W. cor...  | Mospratt street and Springer avenue                             | .....             | 1                  | .....              |
| S. E. cor...  | Nineteenth and Butterfield streets                              | .....             | 1                  | .....              |
| N. W. cor...  | Oakley avenue and Thirty-fifth court                            | .....             | 1                  | .....              |
| N. W. cor...  | Oakley and Douglas avenues                                      | .....             | 1                  | .....              |
| N. W. cor...  | Oakley avenue and Thirty-sixth street                           | .....             | .....              | 1                  |

\* In place of single.

## SOUTH DIVISION.—CONTINUED.

| LOCATION.   | STREET.   | Size of Hydr'ts.  |                    |                    |
|---|---|-------------------|--------------------|--------------------|
|   |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| West side...  | Oakley avenue, 250 feet N. of Archer avenue.      | .....             | .....              | 1                  |
| East side...  | Portland av., bet. Twenty-sixth and 27th sts.     | .....             | 1                  | .....              |
| West side...  | Portland ave., 241 ft. S. of Twenty-seventh st.   | .....             | 1                  | .....              |
| West side...  | Portland ave., 245 ft. S. of Twenty-eighth st.    | .....             | 1                  | .....              |
| N. W. cor...  | Portland avenue and Earl street.                  | .....             | 1                  | .....              |
| West side...  | Portland ave., bet. Thirtieth and 31st streets.   | .....             | 1                  | .....              |
| West side...  | Prairie ave., 400 feet S. of Thirty-third street. | .....             | .....              | 1                  |
| West side...  | Prairie ave., bet. Thirty-seventh and 38th sts.   | .....             | 1                  | .....              |
| S. W. cor...  | Prairie avenue and Thirty-eighth street.          | .....             | 1                  | .....              |
| *N. E. cor...   | Quincy street and Fifth avenue.                   | .....             | 1                  | .....              |
| S. E. cor...  | Seventeenth and Butterfield streets.              | .....             | 1                  | .....              |
| N. E. cor...  | Stanton and Egan avenues.                         | .....             | 1                  | .....              |
| N. W. cor...  | Stanton avenue and Oxford court.                  | .....             | 1                  | .....              |
| East side...  | Stanton avenue, 250 feet N. of Oxford court.      | .....             | .....              | 1                  |
| East side...  | Stanton ave., 300 feet S. of Thirty-seventh st.   | .....             | .....              | 1                  |
| *S. W. cor...   | Stanton avenue and Thirty-seventh street.         | .....             | 1                  | .....              |
| N. W. cor...  | Thirty-first st. and alley W. of Ullman st.       | .....             | 1                  | .....              |
| North side...   | Thirty-second st., 300 feet W. of Laurel st.      | .....             | .....              | 1                  |
| North side...   | Thirty-sixth st., 300 feet W. of Oakley ave.      | .....             | .....              | 1                  |
| S. W. cor...  | Thirty-seventh street and Shields avenue.         | .....             | 1                  | .....              |
| N. W. cor...  | Thirty-seventh street and Fifth avenue.           | .....             | 1                  | .....              |
| North side...   | Thirty-eighth st., 300 feet E. of Butler st.      | .....             | .....              | 1                  |
| S. E. cor...  | Twenty-first and La Salle streets.                | .....             | 1                  | .....              |
| S. E. cor...  | Twenty-second and Dearborn streets.               | .....             | 1                  | .....              |
| *North side...  | Twenty-fo'th st. bet. Portl'd & Wentw'th aves.    | .....             | 1                  | .....              |
| N. E. cor...  | Twenty-fourth and Butterfield streets.            | .....             | 1                  | .....              |
| Total in South Division.  |   | .....             | 56                 | 17                 |
| Previously put in.  |   | 188               | 545                | 627                |
| Total   |   | 188               | 601                | 644                |
| Less by single hydrants taken out and replaced by 2½-inch double. |   | .....             | .....              | 3                  |
| Total in use in South Division.                                   |   | 188               | 601                | 641                |

\* In place of single.



## WEST DIVISION.

| LOCATION.     | STREET.   | Size of Hydr'ts.  |                    |                    |
|---------------|---|-------------------|--------------------|--------------------|
|               |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| N. W. cor..   | Albany and Warren avenues.....                      |                   | 1                  | ....               |
| S. E. cor.... | Aberdeen street and Rundall place.....              |                   |                    | 1                  |
| North side..  | Adams street, 309 feet W. of Western avenue.....    |                   | 1                  | ....               |
| North side..  | Adams street, 287 feet W. of Campbell ave.....      |                   | 1                  | ....               |
| North side..  | Armitage ave., bet. Western and Oakley aves.....    |                   |                    | 1                  |
| N. W. cor..   | Armitage avenue and Leavitt street.....             |                   | 1                  | ....               |
| N. E. cor.... | Armitage and Oakley avenues.....                    |                   | 1                  | ....               |
| North side..  | Armitage avenue, 300 feet W. of Robey st.....       |                   |                    | 1                  |
| N. W. cor..   | Ashland avenue and Blackhawk street.....            |                   | 1                  | ....               |
| West side...  | Ashland ave., 400 ft. S. of Twenty-second st.....   |                   | 1                  | ....               |
| East side...  | Ashland ave., 700 ft. S. of Twenty-second st.....   |                   | 1                  | ....               |
| East side...  | Ashland ave., 1,000 ft. S. of Twenty-second st..... |                   | 1                  | ....               |
| East side...  | Ashland ave., 1,300 ft. S. of Twenty-second st..... |                   | 1                  | ....               |
| East side...  | Ashland ave., 1,600 ft. S. of Twenty-second st..... |                   | 1                  | ....               |
| East side...  | Ashland ave., 1,900 ft. S. of Twenty-second st..... |                   | 1                  | ....               |
| East side...  | Ashland ave., 2,320 ft. S. of Twenty-second st..... |                   | 1                  | ....               |
| N. E. cor.... | Ashland and Olive streets.....                      |                   | 1                  | ....               |
| N. W. cor..   | Ashland and Almond streets.....                     |                   | 1                  | ....               |
| *North side.  | Augusta street, 200 feet W. of Holt street.....     |                   | 1                  | ....               |
| S. E. cor.... | Augusta and Newton streets.....                     |                   | 1                  | ....               |
| †N. W. cor.   | Austin avenue and Carpenter street.....             |                   | 1                  | ....               |
| N. E. cor.... | Bickerdike and Huron streets.....                   |                   | 1                  | ....               |
| East side...  | Blue Island ave., bet. Eleventh & Taylor sts.....   |                   | 1                  | ....               |
| East side...  | Blue Island ave., bet. Eleventh & Twelfth sts.....  |                   | 1                  | ....               |
| S. W. cor.... | Blue Island avenue and Hastings street.....         |                   | 1                  | ....               |
| S. W. cor.... | Blue Island avenue and Thirteenth place.....        |                   | 1                  | ....               |
| N. E. cor.... | Blue Island avenue and Fourteenth street.....       |                   | 1                  | ....               |
| West side...  | Bryson street, 300 feet E. of Leavitt street.....   |                   |                    | 1                  |
| N. W. cor..   | California avenue and Laughton street.....          |                   | 1                  | ....               |
| N. W. cor..   | California avenue and Taylor street.....            |                   | 1                  | ....               |
| N. W. cor..   | California avenue and Harvard street.....           |                   | 1                  | ....               |
| N. W. cor..   | California avenue and Congress street.....          |                   | 1                  | ....               |
| East side...  | California avenue, 300 feet N. of Twelfth st.....   |                   |                    | 1                  |
| N. W. cor..   | California avenue and Fillmore street.....          |                   | 1                  | ....               |
| N. W. cor..   | Center and Milwaukee avenues.....                   |                   | 1                  | ....               |
| N. W. cor..   | Chicago avenue and Leavitt street.....              |                   |                    | 1                  |
| North side..  | Chicago ave., bet. Robey st. and Hoyne ave.....     |                   | 1                  | ....               |
| *N. W. cor.   | Chicago avenue and Sangamon street.....             |                   | 1                  | ....               |
| N. W. cor..   | Chicago avenue and Dudley street.....               |                   | 1                  | ....               |
| N. W. cor..   | Cicero court and Congress street.....               |                   |                    | 1                  |
| N. E. cor.... | Clarinda and Wood streets.....                      |                   | 1                  | ....               |
| N. E. cor.... | Cleaver street and Milwaukee avenue.....            |                   | 1                  | ....               |
| West side...  | Cleaver st., bet. Blackhawk and Bradley sts.....    |                   | 1                  | ....               |
| N. W. cor..   | Coblentz and Robey streets.....                     |                   | 1                  | ....               |
| North side..  | Coblentz st., bet. Hoyne ave. and Robey st.....     |                   |                    | 1                  |
| N. E. cor.... | Coblentz street and Hoyne avenue.....               |                   | 1                  | ....               |
| N. W. cor..   | Coblentz and Leavitt streets.....                   |                   | 1                  | ....               |

\* In place of single.

† In place of 4-inch double.

## WEST DIVISION.—CONTINUED.

| LOCATION.    | STREET.   | Size of Hydr'ts.  |                    |                    |
|--------------|---|-------------------|--------------------|--------------------|
|              |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| N. W. cor..  | Colorado avenue and Gross terrace.....                              | 1                 | 1                  | 1                  |
| S. E. cor..  | Colorado avenue and Whipple street.....                             | 1                 | 1                  | 1                  |
| N. E. cor..  | Colorado and Albany avenues.....                                    | 1                 | 1                  | 1                  |
| N. E. cor..  | Congress and Francisco streets.....                                 | 1                 | 1                  | 1                  |
| North side.. | Congress st. 300 feet W. of California ave.....                     | 1                 | 1                  | 1                  |
| N. E. cor..  | Congress and Aberdeen streets.....                                  | 1                 | 1                  | 1                  |
| S. E. cor..  | Cornelia and Wood streets.....                                      | 1                 | 1                  | 1                  |
| N. W. cor..  | Cornelia street and Milwaukee avenue.....                           | 1                 | 1                  | 1                  |
| North side.. | Coulter street, 72 feet W. of Chase court.....                      | 1                 | 1                  | 1                  |
| S. W. cor..  | Coulter street and Hoyne avenue.....                                | 1                 | 1                  | 1                  |
| North side.. | Crystal street, 320 feet W. of Robey street.....                    | 1                 | 1                  | 1                  |
| *N. W. cor.. | Curtis and Erie streets.....  | 1                 | 1                  | 1                  |
| West side..  | Curtis street, bet. May and Huron streets.....                      | 1                 | 1                  | 1                  |
| N. E. cor..  | Curtis and Indiana streets.....                                     | 1                 | 1                  | 1                  |
| *N. W. cor.. | Curtis and Erie streets.....  | 1                 | 1                  | 1                  |
| *N. W. cor.. | Curtis and Kinzie streets.....                                      | 1                 | 1                  | 1                  |
| West side..  | Dudley street, bet. North and Wabansia aves.....                    | 1                 | 1                  | 1                  |
| West side..  | Dudley street, 300 feet S. of Clybourn place.....                   | 1                 | 1                  | 1                  |
| South side.. | Eighteenth street, 418 feet W. of Oakley ave.....                   | 1                 | 1                  | 1                  |
| North side.. | Eighteenth st., bet. Hoyne ave. and Leavitt st.....                 | 1                 | 1                  | 1                  |
| West side..  | Elk Grove avenue, between Clybourn place and Bloomingdale road..... | 1                 | 1                  | 1                  |
| North side.. | Emerson avenue, 280 feet W. of Robey street.....                    | 1                 | 1                  | 1                  |
| S. E. cor..  | Erie and May streets.....   | 1                 | 1                  | 1                  |
| *N. E. cor.. | Evergreen avenue and Leavitt streets.....                           | 1                 | 1                  | 1                  |
| S. E. cor..  | Ewing street and Blue Island avenue.....                            | 1                 | 1                  | 1                  |
| S. W. cor..  | Fairfield avenue and Harvard street.....                            | 1                 | 1                  | 1                  |
| S. W. cor..  | Fairfield avenue and Taylor street.....                             | 1                 | 1                  | 1                  |
| N. E. cor..  | Fillmore and Rockwell streets.....                                  | 1                 | 1                  | 1                  |
| North side.. | Fifteenth street, E. of Washtenaw avenue.....                       | 1                 | 1                  | 1                  |
| S. W. cor..  | Fisk and Twenty-second streets.....                                 | 1                 | 1                  | 1                  |
| East side..  | Fisk street, 340 feet S. of Twenty-second st.....                   | 1                 | 1                  | 1                  |
| North side.. | Flournoy street, 300 feet W. of Oakley ave.....                     | 1                 | 1                  | 1                  |
| North side.. | Flournoy st., bet. Hoyne ave. and Leavitt st.....                   | 1                 | 1                  | 1                  |
| *N. E. cor.. | Fowler and Leavitt streets.....                                     | 1                 | 1                  | 1                  |
| *N. W. cor.. | Front and Sangamon streets.....                                     | 1                 | 1                  | 1                  |
| West side..  | Genesee ave., 290 ft. S. of Twenty-second st.....                   | 1                 | 1                  | 1                  |
| S. W. cor..  | Genesee and Ogden avenues.....                                      | 1                 | 1                  | 1                  |
| West side..  | Genesee ave., 300 ft. N. of Twenty-second st.....                   | 1                 | 1                  | 1                  |
| N. E. cor..  | Gilpin place and Sibley street.....                                 | 1                 | 1                  | 1                  |
| West side..  | Girard street, bet. North and Wabansia aves.....                    | 1                 | 1                  | 1                  |
| S. W. cor..  | Girard and Hervey streets.....                                      | 1                 | 1                  | 1                  |
| West side..  | Girard street, 287 feet N. of Hervey street.....                    | 1                 | 1                  | 1                  |
| S. W. cor..  | Grand avenue and Rockwell street.....                               | 1                 | 1                  | 1                  |
| S. W. cor..  | Green street and alley, S. of Washington st.....                    | 1                 | 1                  | 1                  |
| West side..  | Green st., bet. Washington and Randolph sts.....                    | 1                 | 1                  | 1                  |
| West side..  | Green street, bet. Lake and Randolph streets.....                   | 1                 | 1                  | 1                  |
| S. W. cor..  | Green and Van Buren streets.....                                    | 1                 | 1                  | 1                  |
| N. E. cor..  | Gross parkway and Rockwell street.....                              | 1                 | 1                  | 1                  |
| North side.. | Gross parkway, bet. Seymour & Rockwell sts.....                     | 1                 | 1                  | 1                  |

\* In place of sing'e.



## WEST DIVISION.—CONTINUED.

| LOCATION.      | STREET.  | Size of Hydr'ts.  |                    |                    |
|----------------|--|-------------------|--------------------|--------------------|
|                |  | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| N. E. cor...   | Halsted and Eagle streets.....                       |                   | 1                  |                    |
| N. E. cor...   | Halsted and Lydia streets.....                       |                   | 1                  |                    |
| S. E. cor...   | Halsted and Wayman streets.....                      |                   | 1                  |                    |
| West side...   | Halsted street, opposite Quincy street.....          |                   | 1                  |                    |
| North side...  | Harvard street, 300 feet W. of California ave.....   |                   |                    | 1                  |
| N. E. cor...   | Harvard and Francisco streets.....                   |                   | 1                  |                    |
| S. W. cor...   | Hermitage avenue and Taylor street.....              |                   | 1                  |                    |
| N. E. cor...   | Hervey and Elk Grove streets.....                    |                   |                    | 1                  |
| North side...  | Homer street, bet. Leavitt st. and Oakley ave.....   |                   | 1                  |                    |
| N. W. cor...   | Hoyne avenue and Parmelee street.....                |                   | 1                  |                    |
| N. W. cor...   | Hoyne avenue and Iowa street.....                    |                   | 1                  |                    |
| N. W. cor...   | Hoyne and Armitage avenues.....                      |                   | 1                  |                    |
| N. W. cor...   | Huron and Armour streets.....                        |                   | 1                  |                    |
| *N. E. cor...  | Huron and Mark streets.....                          |                   | 1                  |                    |
| *N. W. cor...  | Huron and Keith streets.....                         |                   | 1                  |                    |
| *N. W. cor...  | Huron and Temple streets.....                        |                   | 1                  |                    |
| *N. W. cor...  | Huron and Snell streets.....                         |                   | 1                  |                    |
| *N. W. cor...  | Indiana and Armour streets.....                      |                   | 1                  |                    |
| *N. W. cor...  | Indiana and Bickerdike streets.....                  |                   | 1                  |                    |
| North side...  | Iowa street, bet. Hoyne ave. and Robey st.....       |                   | 1                  |                    |
| *N. W. cor...  | Keenon street and Ashland avenue.....                |                   | 1                  |                    |
| †North side... | Kinzie street, bet. Halsted and Union streets.....   |                   | 1                  |                    |
| West side...   | Lafin street, 245 feet S. of Polk street.....        |                   | 1                  |                    |
| West side...   | Lafin street, 280 feet N. of Taylor street.....      |                   | 1                  |                    |
| West side...   | Lafin street, 50 feet S. of Twenty-second st.....    |                   | 1                  |                    |
| West side...   | Lafin street, 350 feet S. of Twenty-second st.....   |                   | 1                  |                    |
| West side...   | Lafin street, 650 feet S. of Twenty-second st.....   |                   | 1                  |                    |
| S. W. cor...   | Lafin and York streets.....                          |                   | 1                  |                    |
| S. E. cor...   | Lafin and Plum streets.....                          |                   | 1                  |                    |
| N. E. cor...   | Lake and Davlin streets.....                         |                   | 1                  |                    |
| N. W. cor...   | Laughton street and Washtenaw avenue.....            |                   | 1                  |                    |
| North side...  | Laughton st., 275 feet W. of Washtenaw ave.....      |                   |                    | 1                  |
| N. W. cor...   | Leavitt and Division streets.....                    |                   | 1                  |                    |
| N. W. cor...   | Leavitt and Homer streets.....                       |                   | 1                  |                    |
| North side...  | Liberty street, 250 feet E. of Jefferson street..... |                   |                    | 1                  |
| South side...  | Liberty street, 240 feet W. of Canal street.....     |                   |                    | 1                  |
| *N. E. cor...  | Lincoln street and Warren avenue.....                |                   | 1                  |                    |
| N. E. cor...   | Lydia and Union streets.....                         |                   | 1                  |                    |
| S. W. cor...   | Lytle street and Vernon Park place.....              | 1                 |                    |                    |
| S. E. cor...   | Lytle and Harrison streets.....                      | 1                 |                    |                    |
| *West side...  | Lytle street, bet. Twelfth and Taylor streets.....   |                   | 1                  |                    |
| N. W. cor...   | Lubeck and Leavitt streets.....                      |                   | 1                  |                    |
| North side...  | Lubeck st., bet. Oakley ave., and Leavitt st.....    |                   |                    | 1                  |
| *N. W. cor...  | Madison street and California avenue.....            |                   | 1                  |                    |
| South side...  | Madison street, 313 feet W. of Ashland ave.....      |                   | 1                  |                    |
| South side...  | Madison street, 323 feet W. of Hoyne avenue.....     |                   | 1                  |                    |
| North side...  | Mather street, 600 feet W. of Desplaines st.....     |                   | 1                  |                    |
| S. W. cor...   | May and George streets.....                          |                   | 1                  |                    |
| *N. W. cor...  | May and Front streets.....                           |                   | 1                  |                    |

\* In place of single.

† In place of 4-inch double.

## WEST DIVISION.—CONTINUED.

| LOCATION.    | STREET.   | Size of Hydr'ts.  |                    |                    |  |
|--------------|---|-------------------|--------------------|--------------------|--|
|              |   | 4-inch<br>Double. | 3½-inch<br>Double. | 3½-inch<br>Single. |  |
| West side..  | May street, opposite Curtis street.....                     |                   | 1                  |                    |  |
| South side.. | Milwaukee av., bet. North av. & Fontenoy pl. ....           |                   |                    | 1                  |  |
| S. W. cor... | Milwaukee avenue and Carpenter street.....                  |                   | 1                  |                    |  |
| North side.. | Monroe street, 320 feet W. of Campbell ave. ....            |                   | 1                  |                    |  |
| North side.. | Monroe street, 300 feet W. of Western ave. ....             |                   | 1                  |                    |  |
| North side.. | Monroe street, bet. Paulina and Wood sts. ....              |                   | 1                  |                    |  |
| North side.. | Monroe street, 330 feet W. of Robey street.. ....           |                   |                    | 1                  |  |
| S. W. cor... | Morgan street and Rundall place.....                        |                   | 1                  |                    |  |
| West side..  | Newton street, 300 feet N. of Augusta street. ....          |                   |                    | 1                  |  |
| South side.. | North avenue, at engine house, W. of Milwaukee avenue. .... |                   |                    | 1                  |  |
| West side..  | Oakley avenue, 345 feet S. of Thirteenth st. ....           |                   |                    | 1                  |  |
| West side..  | Oakley ave., bet. Van Buren and Jackson sts. ....           |                   |                    | 1                  |  |
| West side..  | Oakley avenue, bet. Jackson and Adams sts. ....             |                   |                    | 1                  |  |
| West side..  | Ogden av., bet. Washington b'd & Randolph st. ....          |                   | 1                  |                    |  |
| S. E. cor... | Ogden avenue and Sawyer street.....                         |                   | 1                  |                    |  |
| N. E. cor... | Ogden avenue and Rockwell street.....                       |                   | 1                  |                    |  |
| N. W. cor... | Olive and Twelfth streets.....                              |                   |                    | 1                  |  |
| N. W. cor... | Park avenue and Falls street.....                           |                   | 1                  |                    |  |
| North side.. | Park avenue, 300 feet W. of Falls street.....               |                   |                    | 1                  |  |
| North side.. | Park avenue, 650 feet W. of Falls street.....               |                   | 1                  |                    |  |
| *N. W. cor.  | Paulina and Indiana streets.....                            |                   | 1                  |                    |  |
| *N. W. cor.  | Paulina and Keenon streets.....                             |                   | 1                  |                    |  |
| N. E. cor... | Paulina and Elk streets.....                                |                   | 1                  |                    |  |
| S. W. cor... | Paulina and Superior streets.....                           |                   | 1                  |                    |  |
| *N. W. cor.  | Paulina and Huron streets.....                              |                   | 1                  |                    |  |
| West side..  | Paulina st., bet. Division and Moorman sts. ....            |                   | 1                  |                    |  |
| *S. W. cor.  | Paulina and Moorman streets.....                            |                   | 1                  |                    |  |
| *N. W. cor.  | Paulina street and Warren avenue.....                       |                   | 1                  |                    |  |
| *N. W. cor.  | Paulina street and Washington boulevard.....                |                   | 1                  |                    |  |
| S. W. cor... | Paulina street and Carroll avenue.....                      |                   | 1                  |                    |  |
| S. W. cor... | Paulina street, and alley S. of Kinzie street. ....         |                   | 1                  |                    |  |
| *N. W. cor.  | Randolph and Sheldon streets.....                           |                   | 1                  |                    |  |
| S. E. cor... | Randolph and Ada streets.....                               |                   | 1                  |                    |  |
| S. W. cor... | Randolph street and Willard place.....                      |                   | 1                  |                    |  |
| *N. W. cor.  | Randolph and May streets.....                               |                   | 1                  |                    |  |
| West side..  | Rice street, bet. Leavitt st. and Hoyne ave. ....           |                   | 1                  |                    |  |
| S. E. cor... | Robey street and Carroll avenue.....                        |                   | 1                  |                    |  |
| West side..  | Robey street, 300 feet N. of Iowa street.....               |                   | 1                  |                    |  |
| S. W. cor... | Robey and Fourteenth street.....                            |                   | 1                  |                    |  |
| N. E. cor... | Robey, and alley N. of Chicago avenue.....                  |                   | 1                  |                    |  |
| N. W. cor... | Robey and Rice streets.....                                 |                   | 1                  |                    |  |
| N. W. cor... | Robey and Iowa streets.....                                 |                   | 1                  |                    |  |
| West side..  | Rockwell street, 500 feet N. of Ogden ave. ....             |                   |                    | 1                  |  |
| S. E. cor... | Rosebud street and Western avenue.....                      |                   | 1                  |                    |  |
| S. W. cor... | Sacramento avenue and Madison street.....                   |                   | 1                  |                    |  |
| S. W. cor... | Sacramento and Wilcox avenues.....                          |                   | 1                  |                    |  |
| N. W. cor... | Samuel and Augusta streets.....                             |                   | 1                  |                    |  |
| West side..  | Sangamon street, 154 feet N. of Front street. ....          |                   |                    | 1                  |  |
| S. W. cor... | Sawyer and Twenty-first streets.....                        |                   |                    | 1                  |  |

\* In place of single.



## WEST DIVISION.—CONTINUED.

| LOCATION.     | STREET.   | Size of Hydr'ts.  |                    |                    |
|---------------|---|-------------------|--------------------|--------------------|
|               |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| N. E. cor...  | Seventeenth and Lincoln streets.....                                |                   | 1                  | ...                |
| West side...  | Shober street, 300 feet S. of Bryson street.....                    |                   |                    | 1                  |
| N. W. cor...  | Shober and Bryson streets.....                                      |                   | 1                  | ...                |
| West side...  | Shober street, bet. Hirsch and Bryson streets.....                  |                   | 1                  | ...                |
| N. W. cor...  | Stevens and Van Buren streets.....                                  |                   | 1                  | ...                |
| North side... | Thirteenth pl., bet. Hoyne av. and Leavitt st.....                  |                   |                    | 1                  |
| *N. W. cor... | Thirteenth and Laffin streets.....                                  |                   | 1                  | ...                |
| North side... | Thirteenth st., bet. Laffin st. and Ashland av.....                 |                   |                    | 1                  |
| *N. E. cor... | Thirteenth street and Center avenue.....                            |                   | 1                  | ...                |
| North side... | Thirteenth street, 300 feet W. of Center ave.....                   |                   |                    | 1                  |
| *N. W. cor... | Thirteenth and Throop streets.....                                  |                   | 1                  | ...                |
| North side... | Thirteenth street, 300 feet W. of Throop st.....                    |                   |                    | 1                  |
| *N. W. cor... | Thirteenth and Loomis streets.....                                  |                   | 1                  | ...                |
| North side... | Thirteenth street, 300 feet W. of Loomis st.....                    |                   |                    | 1                  |
| East side...  | Throop street, 60 feet S. of Twenty-second st.....                  |                   | 1                  | ...                |
| East side...  | Throop street, 410 feet S. of Twenty-second st.....                 |                   | 1                  | ...                |
| East side...  | Throop street, 750 feet S. of Twenty-second st.....                 |                   | 1                  | ...                |
| East side...  | Throop street, 1,087 ft. S. of Twenty-second st.....                |                   | 1                  | ...                |
| North side... | Twenty-first street, between Ashland avenue and Paulina street..... |                   | 1                  | ...                |
| North side... | Twenty-first st., bet. Wood and Paulina sts.....                    |                   | 1                  | ...                |
| North side... | Twenty-first st., bet. Oakley and Western aves.....                 |                   | 1                  | ...                |
| S. W. cor...  | Twenty-first and Robey streets.....                                 |                   | 1                  | ...                |
| South side... | Van Buren st., at first alley W. of Morgan st.....                  |                   | 1                  | ...                |
| North side... | Van Buren st., at 2d alley W. of Morgan st.....                     |                   | 1                  | ...                |
| North side... | Van Buren st., at 1st alley W. of Aberdeen st.....                  |                   | 1                  | ...                |
| North side... | Van Buren st., at 2d alley W. of Aberdeen st.....                   |                   | 1                  | ...                |
| South side... | Van Buren st., 300 feet W. of Center ave.....                       |                   | 1                  | ...                |
| North side... | Walnut street, bet. Lincoln and Robey sts.....                      |                   |                    | 1                  |
| North side... | Warren avenue, between Francisco street and California avenue.....  |                   |                    | 1                  |
| N. E. cor...  | Warren and California avenues.....                                  |                   | 1                  | ...                |
| North side... | Warren avenue, between Albany and Sacramento avenues.....           |                   | 1                  | ...                |
| N. E. cor...  | Warren and Sacramento avenues.....                                  |                   | 1                  | ...                |
| North side... | Warren avenue, between Sacramento avenue and Francisco street.....  |                   |                    | 1                  |
| N. E. cor...  | Warren avenue and Francisco street.....                             |                   | 1                  | ...                |
| N. W. cor...  | Washtenaw avenue and Fifteenth street.....                          |                   | 1                  | ...                |
| West side...  | Washtenaw avenue, 400 feet N. of Lake st.....                       |                   | 1                  | ...                |
| N. W. cor...  | Washtenaw avenue and Lake street.....                               |                   | 1                  | ...                |
| N. W. cor...  | Western avenue and Division street.....                             |                   | 1                  | ...                |
| S. W. cor...  | Western avenue and Rice street.....                                 |                   | 1                  | ...                |
| West side...  | Western avenue, bet. Ohio and Indiana sts.....                      |                   | 1                  | ...                |
| S. W. cor...  | Western avenue and Superior street.....                             |                   | 1                  | ...                |
| S. W. cor...  | Western avenue and Huron street.....                                |                   | 1                  | ...                |
| S. W. cor...  | Western avenue and Erie street.....                                 |                   | 1                  | ...                |
| S. W. cor...  | Western avenue and Washington boulevard.....                        |                   | 1                  | ...                |
| S. W. cor...  | Western and Chicago avenues.....                                    |                   | 1                  | ...                |
| West side...  | Wood street, bet. Cornelia and Augusta sts.....                     |                   | 1                  | ...                |
| *N. W. cor    | Wood and Augusta streets.....                                       |                   | 1                  | ...                |

\*In place of single.

## WEST DIVISION.—CONTINUED.

| LOCATION.     | STREET.   | Size of Hydr'ts.  |                    |                    |
|---------------|---|-------------------|--------------------|--------------------|
|               |   | 4-inch<br>Double. | 2½-inch<br>Double. | 2½-inch<br>Single. |
| *N. W. cor.   | Wood and Iowa streets....   |                   | 1                  | ....               |
| West side..   | Wood street, bet. Augusta and Thomas sts....                                |                   | 1                  | ....               |
| S. E. cor.... | Wood and Brigham streets.....   |                   | 1                  | ....               |
| N. W. cor..   | Wright place and Grand avenue.....  |                   |                    | 1                  |
|               | Total in West Division.....   | 3                 | 191                | 51                 |
|               | Previously put in.....  | 226               | 1011               | 1197               |
|               | Total.....  | 229               | 1202               | 1248               |
|               | Less by hydrants taken out and replaced by<br>others of different size..... | 2                 | ....               | 33                 |
|               | Total in use in West Division.....  | 227               | 1202               | 1215               |

\* In place of single.

## RECAPITULATION.

## HYDRANTS TAKEN OUT DURING 1885.

| DIVISION.  | 4 Inch<br>Double. | 2½ Inch<br>Double. | 2½ Inch<br>Single. | TOTAL. |
|------------|-------------------|--------------------|--------------------|--------|
| North..... | 2                 | 0                  | 6                  | 8      |
| South..... |                   | 0                  | 3                  | 3      |
| West.....  | 2                 | 0                  | 33                 | 35     |
| Total..... | 4                 | 0                  | 42                 | 46     |

## HYDRANTS PLACED DURING 1885.

| DIVISION.                  | 4 Inch<br>Double. | 2½ Inch<br>Double. | 2½ Inch<br>Single. | TOTAL. |
|----------------------------|-------------------|--------------------|--------------------|--------|
| North.....                 | 7                 | 34                 | 14                 | 55     |
| South.....                 |                   | 56                 | 17                 | 73     |
| West.....                  | 3                 | 191                | 51                 | 245    |
| Total... ..                | 10                | 281                | 82                 | 373    |
| Net increase<br>in 1885. } | 6                 | 281                | 40                 | 327    |

## TOTAL NUMBER OF HYDRANTS IN THE CITY.

| DIVISION.                     | 4 Inch<br>Double. | 2½ Inch<br>Double. | 2½ Inch<br>Single. | TOTAL. |
|-------------------------------|-------------------|--------------------|--------------------|--------|
| North.....                    | 126               | 295                | 448                | 869    |
| South.....                    | 188               | 601                | 641                | 1,430  |
| West.....                     | 227               | 1,202              | 1,215              | 2,644  |
| Grand total in<br>the city. } | 541               | 2,098              | 2,304              | 4,943  |



## OGDEN DAM.

This dam has been lengthened and rebuilt in a substantial manner by sinking cribs filled with stone. The crest of the dam is placed as high as can be without incurring liability for damages by overflow from back water on the land and improvements along the Desplaines river. During freshets in the Desplaines the water flows over the top of the dam and the adjacent country is under water, which finds an outlet through the Ogden ditch into the Chicago river. It is quite possible that the water may cut a new channel south of the dam, which would make it necessary to further extend the dam to the Illinois and Michigan canal—a distance of about 1,600 feet.

## SURVEY OF THE DESPLAINES.

A survey of the Desplaines valley from Summit to Joliet is now in progress. This survey will furnish important data for use when the question of changes in the disposal of the city sewage, and the improvement of the water supply is under consideration by the commission to be appointed for that purpose.

## FULLERTON AVENUE PUMPING WORKS.

With the exception of a few days in August the discharge from these works has been from the lake into the river.



The crib at the lake end of the tunnel was burned June 5. The damage done to it was repaired soon after. A considerable quantity of charred timber from the fire fell into the tunnel, traveled with the current toward the river, and caused more or less annoyance all summer by getting into the wheels. In October a large timber got into them and broke them both, completely disabling them. The damage was repaired immediately, and the machinery and works are now in good order.

The following table shows the operation of these works for the year:

OPERATION OF ENGINES AND BOILERS AT NORTH BRANCH RIVER PUMPING WORKS.

ENGINEER'S REPORT.

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| MONTHS.         | Number of Hours<br>run per Month. | Total<br>Revolutions per<br>Month. | Average Number of<br>Revolutions per<br>Minute. | Average Head of<br>Pumps. | Total Number of<br>Cubic Feet of<br>Water Pumped<br>into the River. | Total Number of<br>Cubic Feet of<br>Water Pumped<br>into the Lake. | Average Number<br>of Cubic Feet of<br>Water Pumped<br>per Minute. | Pounds of Coal con-<br>sumed per Month<br>for Pumping. | Duty per<br>100 lbs. | REMARKS.   |
|-----------------|-----------------------------------|------------------------------------|---|---------------------------|---|--|---|--|----------------------|--|
| January .....   | H. M.<br>704:15                   | 3,030,740                          | 71.90   | 3.05                      | 678,094,665   | .....  | 15,823.65   | 512,500  | 25,653,169           |  |
| February .....  | 654:15                            | 2,910,264                          | 74.42   | 3.00                      | 615,989,460   | .....  | 15,692.76   | 492,800  | 23,437,119           |  |
| March .....     | 723:15                            | 3,295,471                          | 75.85   | 3.00                      | 682,253,600   | .....  | 15,721.43   | 547,800  | 24,307,518           |  |
| April .....     | 61:15                             | 270,677                            | 75.28   | 3.02                      | 57,852,810  | .....  | 15,742.26   | 47,400   | 23,806,306           | Shut down Apr. 3 to overhaul machinery.  |
| May .....       | 254:00                            | 1,134,771                          | 74.37   | 2.95                      | 298,605,990   | .....  | 15,656.56   | 195,700  | 22,227,400           | Started pumps May 23.  |
| June .....      | 378:15                            | 1,698,654                          | 74.87   | 2.90                      | 350,845,160   | .....  | 15,453.89   | 289,100  | 21,993,086           | Lake crib burned June 5. Works stopped.  |
| July .....      | 699:00                            | 3,193,767                          | 76.23   | 3.05                      | 663,616,620   | .....  | 15,822.00   | 540,000  | 24,194,359           |  |
| August .....    | 537:32                            | 2,550,736                          | 75.26   | 2.85                      | 348,116,910   | 165,009,000  | 15,339.17   | 370,470  | 24,471,390           | Freshet in river caused stoppage in Aug.<br>Discharged into lake 185 hours, begin-<br>ning Aug. 13.      |
| September ..... | 358:10                            | 1,614,102                          | 75.16   | 2.80                      | 325,788,400   | .....  | 15,100.00   | 243,900  | 23,375,531           | Freshet in river caused stoppage in Sept.<br>Log passed through tunnel and broke<br>both wheels Oct. 27. |
| October .....   | 603:25                            | 2,716,795                          | 75.07   | 2.80                      | 557,584,800   | .....  | 15,403.53   | 409,200  | 23,846,857           | Put in new wheels and stem bearings in<br>November.  |
| November .....  | .....                             | .....                              | .....   | .....                     | .....   | .....  | .....   | .....  | .....                |  |
| December .....  | 609:00                            | 2,985,121                          | 74.41   | 2.85                      | 608,159,200   | .....  | 15,150.35   | 443,250  | 24,773,372           | Started pumps Dec. 2.  |
| Totals .....    | 5,562:22                          | 25,419,298                         | .....   | .....                     | 5,126,885,795   | .....  | .....   | 4,092,120  | .....                |  |
| Average .....   | .....                             | .....                              | 74.80   | 2.969                     | .....   | .....  | 15,542.90   | .....  | .....                |  |

## TRAFFIC TUNNELS.

The La Salle Street Tunnel is in good order, and will require only ordinary repairs during the coming year.

The Washington Street Tunnel shows no apparent change from its disagreeable condition, and we have no means at our command for its improvement.

## RIVER AND DREDGING.

The level of the water in the lake has remained at a high stage during the year, and the depth of water in the river ample for all purposes of navigation without dredging, except in a few isolated cases. From experience and records in the past we can not expect this high stage of water to continue. It will gradually recede toward low-water mark, when a considerable amount of dredging will be necessary to maintain a navigable channel in the river.

The following table shows the level of water in the river above city datum, or low water mark, during the past year:

| MONTH.         | Mean. | Highest. | Lowest. | No. of days<br>above Mean. |
|----------------|-------|----------|---------|----------------------------|
| January.....   | 2.25  | 3.20     | 1.70    | 14                         |
| February.....  | 2.42  | 3.50     | 1.80    | 10                         |
| March.....     | 2.38  | 3.00     | 1.50    | 15                         |
| April.....     | 2.84  | 3.60     | 2.30    | 14                         |
| May.....       | 3.04  | 3.90     | 2.10    | 15                         |
| June.....      | 3.16  | 3.70     | 2.80    | 12                         |
| July.....      | 3.15  | 3.60     | 2.70    | 13                         |
| August.....    | 3.39  | 4.10     | 2.10    | 12                         |
| September..... | 3.25  | 4.00     | 2.80    | 13                         |
| October.....   | 3.16  | 3.80     | 2.10    | 16                         |
| November.....  | 2.81  | 3.50     | 2.10    | 10                         |
| December.....  | 2.48  | 3.70     | 1.80    | 12                         |
|                | 2.86  | .....    | .....   | 156                        |

## BRIDGES AND VIADUCTS.

For a number of years past we have been obliged to call attention to the unsafe condition of a number of the old bridges and viaducts, particularly Twelfth, Eighteenth and State street bridges and Indiana street viaduct. These structures are completely worn out and beyond repair. The traffic to which they are subjected is far greater than they were intended to carry when new, and at the present time they are a source of great expense to maintain them in passable condition. I would urge the necessity of replacing these structures with new ones as early as possible,



which should be proportioned to the work they have to perform. If this is not done in the near future we shall be under the necessity of closing them to public use, and thus deprive the citizens of important thoroughfares.

All the bridges and viaducts have been maintained in as good condition as possible, repairs made when needed and the iron work painted, particularly on the lower chords and members, where the necessity is greatest.

#### LAKE STREET BRIDGE.

A new double roadway bridge, very similar to the one at Rush street is now in progress of erection at this point to replace the old one which was worn out and dangerous. The moving part of the structure will be 220 feet long by 59 feet wide, operated by steam power, and lighted by electric lights.

The experience gained at Rush street bridge suggested several improvements, particularly in the machinery, which have been adopted for Lake street bridge.

It is expected to have this bridge finished before the opening of navigation. The cost of the work will be shared by the Chicago West Division Railway Company, and will amount to about \$140,000.

It is unfortunate that the viaduct adjoining this bridge is not of such a character as regards strength

and proportions as to admit of the bridge being utilized for extra heavy loads and traffic. Such a viaduct should have been built and erected while the thoroughfare is not in use, so that no further interruption to traffic need hereafter occur for such purpose.

#### ADAMS STREET VIADUCT.

The old single roadway structure at this point has been taken down and a new one, the full width of the street, erected, at the expense of the Chicago Passenger Railway Company. The new structure is designed to carry the heaviest city traffic, and is so planned that a double roadway swing bridge can be built over the river here when ordered by the City Council. The new viaduct has a truss span 153 feet long, and a girder span 55 feet long, each of which are 58 feet wide over all. The superstructure was built by the Keystone Bridge Company under contract for \$27,993. The foundations were built by our own men, at a cost of \$5,469.40, making the total cost of the improvement \$33,462.40.

#### ERIE STREET VIADUCT.

This structure was completed and open for travel about June 1, 1885. A description of it was given in our last report.



## QUALITY OF WATER.

The water in the lake during the past year has been the subject of much complaint from citizens. Roily water, caused by storms and the movement of ice which has grounded near the shore out into deeper water, carrying sediment with it, and depositing it there, causes much of this complaint. The water in the winter months is almost continually in motion, so that there is scarcely any chance for it to settle and clear. During the summer, except after occasional storms, the water is in very good condition.

## INLET BASIN.

The inlet basin on the lake shore has been kept in repair and clean ready for use when emergencies arise.

## LAKE TUNNELS.

The lake tunnels are in good condition, and their capacity is sufficient to supply the present demands. Their limit will be reached when the new pumping engines now in progress of construction are completed and in full operation.

## LAKE CRIB.

The lake crib is in good order, and has required only ordinary repairs during the past year.

## SOUTH BRANCH RIVER PUMPING WORKS.

These works have been in regular operation during the past year, and have been able to keep the main

river and south branch in very good condition and free from offense.

This has been done with but three of the four engines. At times of freshets in the river the works have been stopped, and the waters have been discharged through their natural outlet into the lake. These freshets occur after heavy or continued rains, or from melting of snow in the spring. The volume of water at such times is so great that the operation of the pumps serves no useful purpose. The canal is so taxed during these freshets to carry off the water draining into it that it is not capable of taking any additional water from these works.

In April the works were tested by a commission of engineers. The boilers and engines were found to be in every way satisfactory, but the pumps failed to come up to the conditions required in both capacity and duty. The contractors are now making expensive changes and improvements, by which they expect to fulfill all the conditions of their contract. The work is being done on one pair of pumps at a time, so as to not interfere with the operation of the works.

No steps have been taken to remedy the stagnant and offensive condition of the south fork and stock-yards slip.

The following table shows the operation of the works for each month during the year:



| MONTH.                | Number of hours run per month. |               |               |               | Average Number of Revolutions per Minute. | Average Height of Water in Canal at Engine Building, in Feet. | Average Height of Water in Canal at the Lock, in Feet. | Average height of Water in the River, in Feet. | Average Head of Water Against Pumps, in Feet. | Pounds of Coal Consumed per Month. | REMARKS.   |
|-----------------------|--------------------------------|---------------|---------------|---------------|---|---|--|--|---|------------------------------------|--|
|                       | Engine No. 1.                  | Engine No. 2. | Engine No. 3. | Engine No. 4. |   |   |  |  |   |                                    |  |
| January .....         | 744                            | .....         | 744           | 744           | 79.00                                     | 5.200   | 4.400  | 1.640  | 3.330   | 1,168,350                          | { Shut down from 17th to 26th on account of freshet.<br>Shut down March 30th on account of freshet.<br>High water during entire month. Run all engines 100 hours for test by experts.<br>Engines not started until 16th on account of high water.<br>Shut down from 3d to 10th on account of high water.<br>Stopped but one hour during July.<br>Shut down from 2d to 4th, from 10th to 14th, and from 24th to 31st on account of high water.<br>Started Sept. 4th. Shut down from 9th to 24th on account of high water.<br>Shut down from 7th to 28th on account of high water. |
| February .....        | 725                            | 456           | 456           | 461           | 79.50                                     | 5.525   | 4.725  | 1.363  | 3.600   | 700,150                            |  |
| March .....           | 725                            | 735           | 735           | 735           | 81.20                                     | 5.118   | 4.318  | 2.000  | 3.100   | 1,250,540                          |  |
| April .....           | .....                          | .....         | .....         | .....         | .....                                     | .....   | .....  | .....  | .....   | .....                              |  |
| May .....             | 547                            | 547           | 547           | 381           | 80.00                                     | 4.725   | 4.325  | 2.235  | 2.200   | 672,200                            | { Shut down from 17th to 26th on account of freshet.<br>Shut down March 30th on account of freshet.<br>High water during entire month. Run all engines 100 hours for test by experts.<br>Engines not started until 16th on account of high water.<br>Shut down from 3d to 10th on account of high water.<br>Stopped but one hour during July.<br>Shut down from 2d to 4th, from 10th to 14th, and from 24th to 31st on account of high water.<br>Started Sept. 4th. Shut down from 9th to 24th on account of high water.<br>Shut down from 7th to 28th on account of high water. |
| June .....            | 547                            | 547           | 547           | .....         | 79.45                                     | 4.800   | 4.400  | 2.345  | 2.450   | 957,250                            |  |
| July .....            | .....                          | 743           | 741           | 743           | 85.00                                     | 4.950   | 4.550  | 2.400  | 2.550   | 1,488,000                          |  |
| August .....          | 445                            | 445           | 445           | 124           | 85.00                                     | 4.950   | 4.614  | 2.460  | 2.554   | 891,000                            |  |
| September .....       | 271                            | 271           | 271           | .....         | 81.28                                     | 4.900   | 4.500  | 2.700  | 2.200   | 575,290                            | { Shut down from 17th to 26th on account of freshet.<br>Shut down March 30th on account of freshet.<br>High water during entire month. Run all engines 100 hours for test by experts.<br>Engines not started until 16th on account of high water.<br>Shut down from 3d to 10th on account of high water.<br>Stopped but one hour during July.<br>Shut down from 2d to 4th, from 10th to 14th, and from 24th to 31st on account of high water.<br>Started Sept. 4th. Shut down from 9th to 24th on account of high water.<br>Shut down from 7th to 28th on account of high water. |
| October .....         | 744                            | 744           | 744           | 72            | 87.00                                     | 5.128   | 4.728  | 2.331  | 2.797   | 1,604,000                          |  |
| November .....        | 221                            | .....         | 221           | 221           | 87.20                                     | 4.900   | 4.500  | 2.100  | 2.800   | 460,000                            |  |
| December .....        | 744                            | .....         | 744           | 744           | 86.11                                     | 5.118   | 4.718  | 1.900  | 3.212   | 1,364,000                          |  |
| Totals .....          | 4,441                          | 4,312         | 6,019         | 3,190         | .....                                     | .....   | .....  | .....  | .....   | 11,130,880                         | { Shut down from 17th to 26th on account of freshet.<br>Shut down March 30th on account of freshet.<br>High water during entire month. Run all engines 100 hours for test by experts.<br>Engines not started until 16th on account of high water.<br>Shut down from 3d to 10th on account of high water.<br>Stopped but one hour during July.<br>Shut down from 2d to 4th, from 10th to 14th, and from 24th to 31st on account of high water.<br>Started Sept. 4th. Shut down from 9th to 24th on account of high water.<br>Shut down from 7th to 28th on account of high water. |
| General average ..... | .....                          | .....         | .....         | .....         | 83.23                                     | 5.034   | 4.634  | 2.200  | 2.830   | .....                              |  |

## ASHLAND AVENUE BRIDGE.

A new bridge over the canal at Ashland avenue is in course of construction, to replace the old wooden structure. The new one is of iron, in one span of 128 feet. The street has been graded and cindered both north and south of the bridge, thus making it a good thoroughfare. The cost of the structure, which is being built by the Pittsburgh Bridge Company, will be about \$6,200.

## BUILDINGS FOR FIRE DEPARTMENT.

During the past year this bureau has designed and superintended the erection of three buildings for the Fire Department, one of which—on Coulter street, near Western avenue,—was built by D. H. Hayes, at a contract price of \$10,253; another on Eda street, near State street, was built by T. Downey, at a contract price of \$9,997, and the third, on North avenue, near Milwaukee avenue, was built by Hansen & Wilke, at a cost of \$10,296.

Permit me to acknowledge my obligations for the courtesy and co-operation of the Commissioner, and other officials of the department, in all matters under the charge of this office, and to the efficiency and faithfulness of the Assistant Engineer, Francis Murphy, William D. Hotchkiss and Henry Raeder; the Draughtsman, Wm. S. Chase; to the Foremen and

Inspectors in charge of the different branches, and others directly connected with the City Engineer's office.

SAMUEL G. ARTINGSTALL,

*City Engineer.*

## SEWERAGE DEPARTMENT.

CHICAGO, December 31, 1885.

DEWITT C. CREGIER, Esq.,

*Commissioner of Public Works.*

DEAR SIR: I have the honor to herewith transmit the Tenth Annual Report of the Bureau of Sewers under the Department of Public Works for the year ending December 31, 1885, being the thirtieth annual statement of the work done in connection with the present sewerage system, which shows in tabulated form the work accomplished in the different branches of this bureau, as well as the cost thereof.



The amount expended for the construction of new sewers and catch-basins in the three divisions of the city during the year 1885 was as follows :

|  |                   |                                     |                           |              |
|--|-------------------|-------------------------------------|---------------------------|--------------|
| Amount paid from appropriation for Sewers,<br>South Division.....  | \$ 52,647 25      |                                     |                           |              |
| Amount paid from appropriation for Sewers,<br>West Division.....   | 186,141 09        |                                     |                           |              |
| Amount paid from appropriation for Sewers,<br>North Division.....  | 14,055 99         | \$202,844 33                        |                           |              |
| MISCELLANEOUS CREDITS.   |                   |                                     |                           |              |
| From special assessment for catch-basins built<br>From village of Jefferson for catch-basins<br>built..... | 12,091 60         |                                     |                           |              |
| From private drain account for junctions set.  | 1,000 00          |                                     |                           |              |
| From amount advanced by private parties...   | 4,491 85          |                                     |                           |              |
| This amount is distributed as follows :  | 8,438 70          | 26,022 15                           |                           |              |
| For constructing 796 catch-basins.   | \$38,271 68       |                                     |                           |              |
| NEW SEWERS BUILT AND COST OF SAME.   |                   |                                     |                           |              |
| Length in Feet.  | Diameter in Feet. | Average depth of<br>Trench in Feet. | Average Cost per<br>Foot. |              |
| 53,888   | 1.0               | 7.3                                 | .84½                      | 45,535 36    |
| 26,893   | 1.¼               | 7.1                                 | .94                       | 25,279 42    |
| 2,924  | 1.½               | 8.0                                 | 1.46½                     | 4,290 97     |
| 20,141   | 2.0               | 9.0                                 | 1.58½                     | 31,873 11    |
| 4,994  | 2.½               | 9.7                                 | 1.86                      | 9,308 56     |
| 3,836  | 3.0               | 9.5                                 | 3.13                      | 12,006 68    |
| 875  | 4.0               | 9.0                                 | 3.71                      | 3,246 25     |
| 733  | 5.0               | 8.5                                 | 4.59                      | 3,364 47     |
| 40   | 6.0               | 16.2                                | 15.78                     | 631 33       |
| 2,300  | 8.0               | 16.8                                | 12.90                     | 29,670 00    |
| 2,023  | 9.0               | 15.8                                | 12.55                     | 25,388 65    |
| 118,647 feet or 22½ miles. Total cost.....   |                   |                                     |                           | \$228,866 48 |
|  |                   |                                     |                           | \$228,866 48 |

Of this amount 15½ miles is constructed of vitrified clay pipe, and 6½ miles is constructed of brick.

TOTAL COST FOR THE CONSTRUCTION OF SEWERS AND  
CATCH-BASINS AND CLEANING SAME, SINCE THE  
ESTABLISHMENT OF THE SEWERAGE SYSTEM  
IN 1885, TO JANUARY 1st, 1886.

| Year.            | Lineal feet<br>of Sewers<br>built. | No. of Catch-<br>Basins built. | No. of Man<br>Holes built. | No. of House<br>Drains built. | Cost of cleaning<br>Sewers and<br>Catch-Basins. | Cost of<br>constructing<br>Sewers. |
|------------------|------------------------------------|--------------------------------|----------------------------|-------------------------------|---|------------------------------------|
| Previous to 1861 | 283.586                            | 1,174                          | 2,102                      | 2,194                         | \$ 5,619 48                                     | \$665,188 46                       |
| 1861.....        | 2.826                              | 18                             | 33                         | 243                           | 1,715 60  | 3,617 31                           |
| 1862.....        | 15.676                             | 72                             | 66                         | 365                           | 2,981 80  | 57,036 42                          |
| 1863.....        | 39.605                             | 192                            | 204                        | 526                           | 6,987 59  | 169,527 38                         |
| 1864.....        | 25.021                             | 189                            | 183                        | 512                           | 9,417 81  | 87,221 48                          |
| 1865.....        | 29.948                             | 223                            | 168                        | 1,288                         | 13,840 57                                       | 137,643 02                         |
| 1866.....        | 48.127                             | 327                            | 271                        | 3,722                         | 28,807 91                                       | 225,564 53                         |
| 1867.....        | 89.681                             | 418                            | 555                        | 3,703                         | 26,709 04                                       | 416,730 51                         |
| 1868.....        | 47.841                             | 480                            | 293                        | 3,261                         | 27,004 06                                       | 197,152 92                         |
| 1869.....        | 139.705                            | 771                            | 928                        | 3,979                         | 26,015 68                                       | 654,141 26                         |
| 1870.....        | 78.166                             | 626                            | 468                        | 5,187                         | 21,464 30                                       | 258,664 70                         |
| 1871.....        | 50.716                             | 277                            | 357                        | 3,093                         | 17,415 46                                       | 153,295 36                         |
| 1872.....        | 47.342                             | 245                            | 341                        | 1,435                         | 21,484 16                                       | 173,255 76                         |
| 1873.....        | 146.702                            | 897                            | 1,015                      | 4,691                         | 81,229 27                                       | 450,222 90                         |
| 1874.....        | 222.322                            | 1,054                          | 1,474                      | 6,292                         | 36,929 57                                       | 587,507 88                         |
| 1875.....        | 120.971                            | 958                            | 789                        | 3,365                         | 32,098 23                                       | 342,932 89                         |
| 1876.....        | 15.248                             | 155                            | 75                         | 1,172                         | 29,345 41                                       | 79,545 28                          |
| 1877.....        | 64.666                             | 363                            | 431                        | 1,822                         | 35,763 33                                       | 291,829 63                         |
| 1878.....        | 88.031                             | 492                            | 603                        | 1,544                         | 25,704 37                                       | 37,264 97                          |
| 1879.....        | 145.381                            | 820                            | 1,043                      | 2,953                         | 32,548 88                                       | 130,840 50                         |
| 1880.....        | 79.128                             | 271                            | 554                        | 4,196                         | 25,561 48                                       | 92,544 08                          |
| 1881.....        | 132.076                            | 548                            | 917                        | 4,810                         | 34,748 53                                       | 452,310 06                         |
| 1882.....        | 98.515                             | 792                            | 725                        | 5,677                         | 33,881 47                                       | 224,450 16                         |
| 1883.....        | 75.364                             | 835                            | 497                        | 5,963                         | 34,735 36                                       | 232,084 33                         |
| 1884.....        | 101.547                            | 751                            | 654                        | 5,957                         | 43,618 93                                       | 258,020 91                         |
| 1885.....        | 118.647                            | 796                            | 854                        | 2,216                         | 46,532 18                                       | 203,188 03                         |
| Total.....       | *2,306 838                         | 13,744                         | 15,600                     | 80,176                        | \$ 658,035 20                                   | \$ 6,581,780 23                    |

\*Of this amount 2,932 feet have been taken up and replaced by larger Sewers leaving the total number of feet of Sewers in place January 1st, 1886, 2,303,906=436,345 miles.

\*Of this number 18 have been abandoned, leaving in place January 1st, 1886, 15,582.

## LENGTH AND DIAMETER OF SEWERS IN PLACE JANUARY 1, 1886, IN THE THREE DIVISIONS.

| DIAMETER IN FEET. | SOUTH DIVISION.               |                   | WEST DIVISION.                |                   | NORTH DIVISION.               |                   | TOTAL THREE DIVISIONS.        |                   | Total<br>in Place,<br>Jan. 1, 1886. |
|-------------------|-------------------------------|-------------------|-------------------------------|-------------------|-------------------------------|-------------------|-------------------------------|-------------------|-------------------------------------|
|                   | Built<br>Previous<br>to 1885. | Built<br>in 1885. | Built<br>Previous<br>to 1885. | Built<br>in 1885. | Built<br>Previous<br>to 1885. | Built<br>in 1885. | Built<br>Previous<br>to 1885. | Built<br>in 1885. |                                     |
| 9.                | .....                         | .....             | 13,470                        | 2,023             | .....                         | .....             | 13,470                        | 2,023             | 15,493                              |
| 8.                | .....                         | .....             | 2,493                         | 2,300             | .....                         | .....             | 2,493                         | 2,300             | 4,793                               |
| 7.                | .....                         | .....             | .....                         | .....             | .....                         | .....             | .....                         | .....             | 1,462                               |
| 6½.               | .....                         | .....             | .....                         | .....             | .....                         | .....             | .....                         | .....             | 3,512                               |
| 6.                | 2,132                         | .....             | 1,380                         | .....             | .....                         | .....             | 23,385                        | 40                | 23,425                              |
| 5½.               | 6,671                         | .....             | 12,660                        | 40                | 4,054                         | .....             | 9,511                         | .....             | 9,511                               |
| 5.                | .....                         | .....             | 9,511                         | .....             | .....                         | .....             | 72,999                        | 733               | 73,732                              |
| 4½.               | 12,257                        | 733               | 46,857                        | .....             | 13,885                        | .....             | 79,601                        | .....             | 79,601                              |
| 4.                | 7,393                         | .....             | 63,875                        | .....             | 8,333                         | .....             | 101,540                       | 875               | 102,415                             |
| 3½.               | 11,327                        | 875               | 78,295                        | .....             | 41,918                        | .....             | 41,619                        | .....             | 41,619                              |
| 3.                | 4,201                         | .....             | 33,659                        | .....             | 8,759                         | .....             | 665                           | .....             | 665                                 |
| 2½.               | .....                         | .....             | 665                           | .....             | .....                         | .....             | 85,779                        | 3,836             | 89,615                              |
| 2.                | 35,447                        | 2,482             | 37,977                        | 1,354             | 13,355                        | .....             | 142,928                       | 4,994             | 147,922                             |
| 20 inches.        | 81,028                        | 2,952             | 30,997                        | 1,964             | 30,903                        | 78                | 588,305                       | 20,141            | 608,446                             |
| 18 inches.        | 6,359                         | .....             | .....                         | .....             | .....                         | .....             | 1,625                         | .....             | 1,625                               |
| 16 inches.        | 149,716                       | 4,996             | 313,323                       | 14,745            | 124,766                       | 400               | 40,793                        | 2,924             | 43,717                              |
| 15 inches.        | 1,625                         | .....             | .....                         | .....             | .....                         | .....             | 156,791                       | 26,893            | 183,684                             |
| 12 inches.        | 18,208                        | 1,363             | 16,780                        | 1,331             | 5,805                         | 230               | 812,422                       | 53,888            | 866,310                             |
| Total             | 292,253                       | 5,138             | 107,076                       | 21,357            | 398                           | 398               | 2,185,259                     | 118,647           | 2,303,906                           |
|                   | 232,699                       | 15,007            | 413,020                       | 34,395            | 166,703                       | 4,486             | 413,874                       | 22,471            | 436,345                             |
|                   | 598,316                       | 33,546            | 1,184,900                     | 79,509            | 402,343                       | 5,592             | Miles.                        | Miles.            | Miles.                              |
|                   | 631,862                       | .....             | 1,364,109                     | .....             | 407,935                       | .....             | .....                         | .....             | .....                               |
|                   | 27.43 per cent.               | .....             | 54.86 per cent.               | .....             | 17.71 per cent.               | .....             | .....                         | .....             | .....                               |

Of the above 436,345 miles, 228,896 miles are constructed of Brick, and 207,449 miles are of Vitrified Clay Pipe.

## TOTAL NUMBER OF CATCH-BASINS AND MAN-HOLES IN PLACE JANUARY 1, 1886.

| DIVISION.         | CONSTRUCTED DURING THE YEAR 1885. |       |        | TOTAL. | Total<br>Previous to<br>1885. | Total<br>in Place<br>Jan. 1, 1886. | Average<br>Cost in 1885. |
|-------------------|-----------------------------------|-------|--------|--------|-------------------------------|------------------------------------|--------------------------|
|                   | SOUTH.                            | WEST. | NORTH. |        |                               |                                    |                          |
| Catch-Basins..... | 205                               | 498   | 93     | 796    | 12,948                        | 13,744                             | \$48 08                  |
| Man-Holes.....    | 251                               | 569   | 34     | 854    | 14,728                        | 15,582                             | .....                    |



LENGTH AND INTERIOR DIAMETER OF PUBLIC SEWERS IN PLACE JANUARY 1st, 1886, IN THE DIFFERENT WARDS OF THE CITY.

[illegible]

## SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE SOUTH DIVISION.

| IN                     | FROM                       | TO                         | Length in feet. | Diameter in feet. | Material. |
|------------------------|----------------------------|----------------------------|-----------------|-------------------|-----------|
| Archer avenue.....     | Douglas avenue.....        | Northeast.....             | 430             | 1                 | Pipe.     |
| Archer avenue.....     | Wood street.....           | Thirty-third street.....   | 357             | 1                 | Pipe.     |
| Archer avenue.....     | Long John street.....      | Southwest.....             | 287             | 1 1/4             | Pipe.     |
| Archer avenue.....     | Long John street.....      | Thirty-third street.....   | 1,300           | 2                 | Brick.    |
| Archer avenue.....     | Douglas avenue.....        | Saratoga street.....       | 875             | 4                 | Brick.    |
| Archer avenue.....     | Thirty-seventh street..... | Saratoga street.....       | 1,175           | 3                 | Brick.    |
| Archer avenue.....     | Thirty-seventh street..... | Southwest.....             | 250             | 2 1/2             | Brick.    |
| Archer avenue.....     | Lyman street.....          | Archer avenue.....         | 838             | 1                 | Pipe.     |
| Arch street.....       | Lock street.....           | Eastward.....              | 266             | 1 1/4             | Pipe.     |
| Bonaparte street.....  | Thirty-seventh street..... | Southward.....             | 40              | 1 1/2             | Pipe.     |
| Butler street.....     | Archer avenue.....         | McGregor street.....       | 725             | 3                 | Brick.    |
| Church place.....      | Fuller street.....         | C. & A. R. R.....          | 197             | 1                 | Pipe.     |
| Cologne street.....    | Main street.....           | Hickory street.....        | 977             | 1                 | Pipe.     |
| College place.....     | Cottage Grove avenue.....  | Westward.....              | 403             | 1                 | Pipe.     |
| Dearborn street.....   | Jackson street.....        | Polk street.....           | 2,190           | 1                 | Pipe.     |
| Douglas avenue.....    | Long John street.....      | Archer avenue.....         | 733             | 5                 | Brick.    |
| Emerald avenue.....    | Twenty-ninth street.....   | Thirtieth street.....      | 673             | 1                 | Pipe.     |
| Emerald avenue.....    | Twenty-eighth street.....  | Twenty-ninth street.....   | 626             | 1 1/4             | Pipe.     |
| Emerald avenue.....    | Thirtieth street.....      | Thirty-first street.....   | 617             | 1 1/4             | Pipe.     |
| Fake street.....       | Lyman street.....          | Northward.....             | 438             | 1                 | Pipe.     |
| Fuller street.....     | Lock street.....           | Deering street.....        | 1,380           | 1                 | Pipe.     |
| Haynes court.....      | Archer avenue.....         | Lyman street.....          | 1,059           | 1                 | Pipe.     |
| Jones street.....      | Thirty-third street.....   | Mill street.....           | 319             | 1                 | Pipe.     |
| Jones street.....      | Thirty-third street.....   | Thirty-third street.....   | 330             | 1 1/4             | Pipe.     |
| Jones street.....      | Thirty-third street.....   | Douglas avenue.....        | 1,004           | 2                 | Brick.    |
| Joseph street.....     | Hickory street.....        | C. & A. R. R.....          | 406             | 1                 | Pipe.     |
| Long John street.....  | Douglas avenue.....        | Archer avenue.....         | 582             | 3                 | Brick.    |
| Mary street.....       | Hickory street.....        | C. & A. R. R.....          | 353             | 1                 | Pipe.     |
| Marshfield avenue..... | Douglas avenue.....        | Thirty-seventh street..... | 1,334           | 2 1/2             | Brick.    |
| Parnell avenue.....    | Douglas avenue.....        | Thirty-seventh street..... | 1,368           | 2 1/2             | Brick.    |

## SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE SOUTH DIVISION.—CONTINUED.

| IN                         | FROM                       | TO                                 | Length in feet. | Diameter in feet. | Material. |
|----------------------------|----------------------------|------------------------------------|-----------------|-------------------|-----------|
| Prairie avenue.....        | Thirty-sixth street.....   | South of Thirty-eighth street..... | 1,338           | 1                 | Pipe.     |
| Short street.....          | Hickory street.....        | Fuller street.....                 | 380             | 1                 | Pipe.     |
| Sixteenth street.....      | Indiana avenue.....        | Michigan avenue.....               | 360             | 1                 | Pipe.     |
| State street.....          | Jackson street.....        | Van Buren street.....              | 470             | 1                 | Pipe.     |
| Stanton avenue.....        | Oxford court.....          | Egan avenue.....                   | 202             | 1½                | Pipe.     |
| Stanton avenue.....        | Oxford court.....          | Thirty-eighth street.....          | 458             | 1½                | Pipe.     |
| Thirty-sixth street.....   | Michigan avenue.....       | Wabash avenue.....                 | 420             | 1                 | Pipe.     |
| Thirty-sixth street.....   | Wabash avenue.....         | Westward.....                      | 307             | 1                 | Pipe.     |
| Thirty-seventh street..... | Michigan avenue.....       | Westward.....                      | 248             | 1                 | Pipe.     |
| Thirty-seventh street..... | Wallace street.....        | Parnell avenue.....                | 332             | 1                 | Pipe.     |
| Thirty-seventh street..... | Shields avenue.....        | Eastward.....                      | 70              | 1                 | Pipe.     |
| Thirty-seventh street..... | Wentworth avenue.....      | East of La Salle street.....       | 467             | 1                 | Pipe.     |
| Thirty-seventh street..... | Shields avenue.....        | Westward.....                      | 575             | 1½                | Pipe.     |
| Thirty-seventh street..... | Indiana avenue.....        | Prairie avenue.....                | 332             | 1½                | Pipe.     |
| Thirty-seventh street..... | Forest avenue.....         | Calumet avenue.....                | 330             | 1½                | Pipe.     |
| Thirty-seventh street..... | Butler street.....         | Eastward.....                      | 413             | 1½                | Pipe.     |
| Thirty-seventh street..... | Forest avenue.....         | Parnell avenue.....                | 332             | 2                 | Brick.    |
| Thirty-eighth street.....  | Forest avenue.....         | Prairie avenue.....                | 333             | 1½                | Pipe.     |
| Ullman street.....         | Thirty-third street.....   | Springer street.....               | 336             | 1½                | Pipe.     |
| Ullman street.....         | Thirty-first street.....   | Springer street.....               | 993             | 2                 | Brick.    |
| Vernon avenue.....         | Oxford court.....          | Egan avenue.....                   | 208             | 1½                | Pipe.     |
| Vernon avenue.....         | Oxford court.....          | Northward.....                     | 452             | 1½                | Pipe.     |
| Vernon avenue.....         | Thirty-seventh street..... | Southward.....                     | 655             | 2                 | Brick.    |
| Wallace street.....        | Thirty-eighth street.....  | Egan avenue.....                   | 655             | 1½                | Pipe.     |
| Wallace street.....        | Thirty-seventh street..... | Thirty-eighth street.....          | 632             | 2                 | Brick.    |



## SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE WEST DIVISION.

| IN                       | FROM                      | TO                                | Length in Feet. | Diameter in Feet. | Material. |
|--------------------------|---------------------------|-----------------------------------|-----------------|-------------------|-----------|
| Albert street.....       | Eighteenth street.....    | Southward.....                    | 305             | 1                 | Pipe.     |
| Armitage avenue.....     | Hoyle avenue.....         | Western avenue.....               | 2,023           | 9                 | Brick.    |
| Armitage avenue.....     | Western avenue.....       | Westward.....                     | 40              | 6                 | Brick.    |
| Arthington street.....   | Loomis street.....        | Sibley street.....                | 377             | 1                 | Pipe.     |
| Ashland street.....      | Almond street.....        | Olive street.....                 | 300             | 1                 | Pipe.     |
| Ashland street.....      | Almond street.....        | Cypress street.....               | 295             | 1 1/4             | Pipe.     |
| Birch street.....        | Robey street.....         | Myrtle street.....                | 300             | 1 1/4             | Pipe.     |
| Bryson street.....       | Lincoln street.....       | West of Robey street.....         | 980             | 1                 | Pipe.     |
| Bryson street.....       | Leavitt street.....       | Shober street.....                | 333             | 1 1/4             | Pipe.     |
| Carroll avenue.....      | Green street.....         | Peoria street.....                | 320             | 1                 | Pipe.     |
| Central Park avenue..... | Twenty-fourth street..... | South of Twenty-fifth street..... | 808             | 2                 | Brick.    |
| Clifton Park avenue..... | Twenty-second street..... | Northward.....                    | 820             | 1 1/4             | Pipe.     |
| Cleaver street.....      | Blackhawk street.....     | Bradley street.....               | 660             | 1                 | Pipe.     |
| Colorado avenue.....     | Kedzie avenue.....        | Sacramento avenue.....            | 1,415           | 2                 | Brick.    |
| Congress st.....         | Francisco street.....     | Sacramento avenue.....            | 670             | 1 1/4             | Pipe.     |
| Congress street.....     | Francisco street.....     | California avenue.....            | 475             | 1                 | Brick.    |
| Cottage place.....       | Throop street.....        | Westward.....                     | 275             | 1                 | Pipe.     |
| Coulter street.....      | Ash street.....           | Westward.....                     | 273             | 1 1/4             | Pipe.     |
| Coulter street.....      | Western avenue.....       | Chase street.....                 | 305             | 1 1/4             | Pipe.     |
| Courtland street.....    | Western avenue.....       | Ash street.....                   | 670             | 1                 | Pipe.     |
| Cunshaw street.....      | Idaho street.....         | Robey street.....                 | 353             | 2                 | Pipe.     |
| Cypress street.....      | Taylor street.....        | Oakley avenue.....                | 370             | 2                 | Brick.    |
| Dickson street.....      | Blackhawk street.....     | Kendall street.....               | 350             | 1                 | Pipe.     |
| Douglas Park place.....  | California avenue.....    | Southward.....                    | 346             | 1 1/4             | Brick.    |
| Edgar street.....        | Clybourn place.....       | Fairfield avenue.....             | 657             | 1 1/4             | Pipe.     |
| Elkgrove street.....     | Bloomingdale road.....    | Bloomingdale road.....            | 674             | 1                 | Pipe.     |
| Elkgrove street.....     | Bloomingdale road.....    | Wabansia avenue.....              | 655             | 1 1/4             | Pipe.     |
| Elkgrove street.....     | Clybourn place.....       | Bloomingdale road.....            | 625             | 2                 | Brick.    |
| Elkgrove street.....     | North avenue.....         | Wabansia avenue.....              | 658             | 2                 | Brick.    |
| Elkgrove street.....     | Armitage avenue.....      | Clybourn place.....               |                 | 2                 | Brick.    |



## SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE WEST DIVISION—CONTINUED.

| IN                     | FROM                       | TO                             | Length<br>in feet. | Diameter<br>in feet. | Material. |
|------------------------|----------------------------|--------------------------------|--------------------|----------------------|-----------|
| Elston avenue.....     | Armitage avenue.....       | Northwest.....                 | 250                | 2½                   | Brick.    |
| Emerson avenue.....    | Robey street.....          | Hoyne avenue.....              | 668                | 1                    | Pipe.     |
| Fall street.....       | Lake street.....           | South of Park avenue.....      | 402                | 1½                   | Pipe.     |
| Ferdinand street.....  | Paulina street.....        | Eastward.....                  | 580                | 1                    | Pipe.     |
| Fifteenth street.....  | Wood street.....           | Summer street.....             | 365                | 1½                   | Pipe.     |
| Fillmore street.....   | Campbell avenue.....       | Westward.....                  | 490                | 1½                   | Pipe.     |
| Flournoy street.....   | Leavitt street.....        | Oakley avenue.....             | 594                | 1                    | Pipe.     |
| Flournoy street.....   | Campbell avenue.....       | Rockwell street.....           | 610                | 1½                   | Pipe.     |
| Fourteenth street..... | Wood street.....           | Lincoln street.....            | 700                | 1½                   | Pipe.     |
| Garden street.....     | West of Morgan street..... | North of Van Buren street..... | 637                | 1                    | Pipe.     |
| Gilpin place.....      | Macallister place.....     | Loomis street.....             | 300                | 1                    | Pipe.     |
| Gross Parkway.....     | Western avenue.....        | West of Seymour.....           | 1,215              | 1                    | Pipe.     |
| Hastings street.....   | Robey street.....          | Hoyne avenue.....              | 700                | 1½                   | Pipe.     |
| Hermitage avenue.....  | Twelfth street.....        | Taylor street.....             | 873                | 1                    | Pipe.     |
| Henry street.....      | Wood street.....           | Paulina street.....            | 633                | 1                    | Pipe.     |
| Hinman street.....     | Western avenue.....        | Oakley avenue.....             | 638                | 1                    | Pipe.     |
| Hinman street.....     | Robey street.....          | Hoyne avenue.....              | 700                | 1½                   | Pipe.     |
| Honore street.....     | Harrison street.....       | Congress street.....           | 289                | 1                    | Pipe.     |
| Hoyne avenue.....      | Peterson street.....       | Churchill street.....          | 330                | 1                    | Pipe.     |
| Hoyne avenue.....      | Peterson street.....       | Wilnot street.....             | 275                | 1½                   | Pipe.     |
| Hoyne avenue.....      | Greenwich street.....      | Churchill street.....          | 275                | 1½                   | Pipe.     |
| Hoyne avenue.....      | Armitage avenue.....       | Greenwich street.....          | 834                | 2                    | Brick.    |
| Hoyne avenue.....      | Milwaukee avenue.....      | Wilnot street.....             | 365                | 2                    | Brick.    |
| Irving place.....      | Polk street.....           | Northward.....                 | 237                | 1                    | Pipe.     |
| Jackson street.....    | Whipple street.....        | Sacramento avenue.....         | 299                | 1                    | Pipe.     |
| Jackson street.....    | Whipple street.....        | Albany avenue.....             | 333                | 1½                   | Pipe.     |
| Jackson street.....    | Kedzie avenue.....         | Albany avenue.....             | 667                | 2                    | Brick.    |
| Jane street.....       | Wood street.....           | Newton street.....             | 335                | 1                    | Pipe.     |
| Jane street.....       | Robey street.....          | Westward.....                  | 400                | 1                    | Pipe.     |
| Lake street.....       | Sacramento avenue.....     | Francisco street.....          | 680                | 1                    | Pipe.     |

|                        |                           |       |    |        |
|------------------------|---------------------------|-------|----|--------|
| Lake street.....       | Kedzie avenue.....        | 1,345 | 3  | Brick. |
| Lake street.....       | California avenue.....    | 664   | 1½ | Pipe.  |
| Lake street.....       | Kedzie avenue.....        | 1,382 | 2½ | Brick. |
| Laughton street.....   | Rockwell street.....      | 667   | 1½ | Pipe.  |
| Laughton street.....   | Western avenue.....       | 580   | 1½ | Pipe.  |
| Leavitt street.....    | North avenue.....         | 440   | 1  | Pipe.  |
| Leavitt street.....    | Huron street.....         | 304   | 1  | Pipe.  |
| Leavitt street.....    | Chicago avenue.....       | 327   | 1½ | Pipe.  |
| Lumber street.....     | Twenty-second street..... | 702   | 1  | Pipe.  |
| Madison street.....    | Kedzie avenue.....        | 1,339 | 2  | Brick. |
| Maplewood avenue.....  | Lake street.....          | 733   | 1  | Pipe.  |
| Marvin street.....     | Western avenue.....       | 670   | 1½ | Pipe.  |
| Monroe street.....     | Rockwell street.....      | 575   | 1  | Pipe.  |
| Monroe street.....     | California avenue.....    | 654   | 1½ | Pipe.  |
| Moore street.....      | Wood street.....          | 668   | 1½ | Pipe.  |
| Myrtle street.....     | Taylor street.....        | 544   | 1  | Pipe.  |
| Nebraska street.....   | Ashland avenue.....       | 596   | 1  | Pipe.  |
| Newberry avenue.....   | Sixteenth street.....     | 527   | 1  | Pipe.  |
| Nineteenth street..... | Kedzie avenue.....        | 332   | 2½ | Brick. |
| Oakley avenue.....     | Crenshaw street.....      | 230   | 1  | Pipe.  |
| Oakley avenue.....     | Taylor street.....        | 350   | 1  | Pipe.  |
| Oakley avenue.....     | Thirteenth street.....    | 575   | 1  | Pipe.  |
| Oakley avenue.....     | Crenshaw street.....      | 183   | 1½ | Pipe.  |
| Olive street.....      | Twelfth street.....       | 442   | 1½ | Pipe.  |
| Park avenue.....       | Fall street.....          | 550   | 1  | Pipe.  |
| Park avenue.....       | California avenue.....    | 587   | 1½ | Pipe.  |
| Parmalee street.....   | Rockwell street.....      | 667   | 1½ | Pipe.  |
| Paulina street.....    | Clybourn place.....       | 336   | 1  | Pipe.  |
| Paulina street.....    | Sixteenth street.....     | 670   | 1  | Pipe.  |
| Paulina street.....    | Armitage street.....      | 325   | 1½ | Pipe.  |
| Polk street.....       | Lafin street.....         | 176   | 1  | Pipe.  |
| Raymond street.....    | Robey street.....         | 269   | 1  | Pipe.  |
| Robey street.....      | Bryson street.....        | 390   | 1  | Pipe.  |
| Robey street.....      | Churchill street.....     | 432   | 1½ | Pipe.  |
| Robey street.....      | Armitage avenue.....      | 660   | 2  | Brick. |
|                        | Sacramento avenue.....    |       |    |        |
|                        | Francisco street.....     |       |    |        |
|                        | Homan avenue.....         |       |    |        |
|                        | Washtenaw avenue.....     |       |    |        |
|                        | P. C. & St. L. R. R.....  |       |    |        |
|                        | Northward.....            |       |    |        |
|                        | Superior street.....      |       |    |        |
|                        | Southwest.....            |       |    |        |
|                        | Sacramento avenue.....    |       |    |        |
|                        | Fulton street.....        |       |    |        |
|                        | Oakley avenue.....        |       |    |        |
|                        | Washtenaw avenue.....     |       |    |        |
|                        | Washtenaw avenue.....     |       |    |        |
|                        | Lincoln street.....       |       |    |        |
|                        | Birch street.....         |       |    |        |
|                        | Lafin street.....         |       |    |        |
|                        | Eighteenth street.....    |       |    |        |
|                        | Sawyer avenue.....        |       |    |        |
|                        | Southward.....            |       |    |        |
|                        | Southward.....            |       |    |        |
|                        | Northward.....            |       |    |        |
|                        | Ashland street.....       |       |    |        |
|                        | Westward.....             |       |    |        |
|                        | Eastward.....             |       |    |        |
|                        | Washtenaw avenue.....     |       |    |        |
|                        | Crossing street.....      |       |    |        |
|                        | Eighteenth street.....    |       |    |        |
|                        | Crossing street.....      |       |    |        |
|                        | Westward.....             |       |    |        |
|                        | Westward.....             |       |    |        |
|                        | Crystal street.....       |       |    |        |
|                        | Clybourn place.....       |       |    |        |



## SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE WEST DIVISION—CONTINUED.

| IN                      | FROM                      | TO                              | Length<br>in feet. | Diameter<br>in feet. | Material. |
|-------------------------|---------------------------|---------------------------------|--------------------|----------------------|-----------|
| Robey street.....       | Division street.....      | Crystal street.....             | 339                | 2                    | Brick.    |
| Robey street.....       | Division street.....      | Jane street.....                | 340                | 2                    | Brick.    |
| Rockwell street.....    | Twenty-second street..... | Loughton street.....            | 1,354              | 3                    | Brick.    |
| Sacramento avenue.....  | Wilcox street.....        | Southward.....                  | 110                | 1                    | Pipe.     |
| Sacramento avenue.....  | Colorado avenue.....      | Wilcox street.....              | 185                | 1 1/4                | Pipe.     |
| Samuel street.....      | Emily street.....         | Jane street.....                | 430                | 1                    | Pipe.     |
| Samuel street.....      | Division street.....      | Jane street.....                | 340                | 1 1/4                | Pipe.     |
| Sangamon street.....    | Front street.....         | Northward.....                  | 163                | 1                    | Pipe.     |
| Sawyer avenue.....      | C. B. & Q. R. R.....      | North of Nineteenth street..... | 1,412              | 1                    | Pipe.     |
| Seventeenth street..... | Robey street.....         | Hoynes avenue.....              | 700                | 1 1/4                | Pipe.     |
| Seventeenth street..... | Wood street.....          | Lincoln street.....             | 700                | 1 1/4                | Pipe.     |
| Shober street.....      | Bryson street.....        | Northward.....                  | 525                | 1                    | Pipe.     |
| Sibley street.....      | Macallister place.....    | Vernon Park place.....          | 324                | 1                    | Pipe.     |
| Sibley street.....      | Macallister place.....    | Gilpin place.....               | 310                | 1 1/4                | Pipe.     |
| Sibley street.....      | Arthington street.....    | Gilpin place.....               | 437                | 1 1/4                | Pipe.     |
| Sumner street.....      | Fifteenth street.....     | Southward.....                  | 375                | 1                    | Pipe.     |
| Superior street.....    | Centre avenue.....        | May street.....                 | 397                | 1                    | Pipe.     |
| Superior street.....    | Leavitt street.....       | Hoynes avenue.....              | 675                | 1                    | Pipe.     |
| Taylor street.....      | Myrtle street.....        | Cypress street.....             | 302                | 1                    | Pipe.     |
| Taylor street.....      | Paulina street.....       | Hermitage avenue.....           | 334                | 1                    | Pipe.     |
| Taylor street.....      | Myrtle street.....        | Robey street.....               | 300                | 1 1/4                | Pipe.     |
| Taylor street.....      | Almond street.....        | Cypress street.....             | 305                | 1 1/4                | Pipe.     |
| Taylor street.....      | Wood street.....          | Hermitage avenue.....           | 333                | 1 1/4                | Pipe.     |
| Taylor street.....      | Marshfield avenue.....    | Paulina street.....             | 304                | 1 1/4                | Pipe.     |
| Taylor street.....      | Wood street.....          | Lincoln street.....             | 660                | 2                    | Brick.    |
| Thomas street.....      | Wood street.....          | Lincoln street.....             | 632                | 1                    | Brick.    |
| Thomas street.....      | Western avenue.....       | Seymour street.....             | 674                | 1                    | Brick.    |
| Twelfth street.....     | Lincoln street.....       | Robey street.....               | 633                | 1                    | Brick.    |
| Twelfth street.....     | Leavitt street.....       | Robey street.....               | 1,340              | 2                    | Brick.    |
| Thirteenth street.....  | Leavitt street.....       | Hoynes avenue.....              | 1,623              | 1                    | Pipe.     |

|                          |                        |                               |        |       |        |
|--------------------------|------------------------|-------------------------------|--------|-------|--------|
| Twenty-first street..... | Kedzie avenue.....     | Sawyer avenue.....            | 883    | 1 1/4 | Pipe.  |
| Van Horn street.....     | Oakley avenue.....     | Western avenue.....           | 641    | 1     | Pipe.  |
| Van Horn street.....     | Leavitt street.....    | Hoyne avenue.....             | 634    | 1     | Pipe.  |
| Walnut street.....       | Kedzie avenue.....     | Albany avenue.....            | 675    | 2     | Brick. |
| Warren avenue.....       | Francisco street.....  | Sacramento avenue.....        | 675    | 1 1/4 | Pipe.  |
| Warren avenue.....       | Park avenue.....       | Francisco street.....         | 667    | 1 1/4 | Pipe.  |
| Western avenue.....      | California avenue..... | Northward.....                | 150    | 1     | Pipe.  |
| Western avenue.....      | Warren avenue.....     | Southward.....                | 160    | 1     | Pipe.  |
| Western avenue.....      | Division street.....   | Thomas street.....            | 668    | 2     | Brick. |
| Western avenue.....      | Armitage avenue.....   | South of Wabansia avenue..... | 2, 300 | 8     | Brick. |
| Whipple street.....      | Colorado avenue.....   | Southward.....                | 592    | 1     | Pipe.  |
| Winnot street.....       | Armitage avenue.....   | Oakley avenue.....            | 750    | 1     | Pipe.  |
| Winchester avenue.....   | Polk street.....       | Northward.....                | 690    | 1     | Pipe.  |
| Wood street.....         | Superior street.....   | Huron street.....             | 268    | 1     | Pipe.  |
| Wood street.....         | Bloomington road.....  | Clybourn place.....           | 657    | 1 1/4 | Pipe.  |
| Wood street.....         | Armitage avenue.....   | Clybourn place.....           | 659    | 2     | Brick. |



## SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE NORTH DIVISION.

| IN                    | FROM                          | TO                    | Length in feet. | Diameter in feet. | Material. |
|-----------------------|-------------------------------|-----------------------|-----------------|-------------------|-----------|
| Belden avenue.....    | Clark street.....             | Westward.....         | 210             | 1                 | Pipe.     |
| Bissell street.....   | Webster avenue.....           | Belden avenue.....    | 655             | 1                 | Pipe.     |
| Cherry avenue.....    | South of Division street..... | Southward.....        | 100             | 1                 | Pipe.     |
| Crilly place.....     | Eugenic street.....           | Northward.....        | 240             | 1                 | Pipe.     |
| Fullerton avenue..... | Larrabee street.....          | Westward.....         | 145             | 1                 | Pipe.     |
| Garfield avenue.....  | Lincoln place.....            | Lincoln avenue.....   | 257             | 1                 | Pipe.     |
| Haines street.....    | Crosby street.....            | Hawthorne avenue..... | 326             | 1 1/4             | Pipe.     |
| Jay street.....       | Centre street.....            | Northward.....        | 517             | 1                 | Pipe.     |
| Laurence street.....  | Southport avenue.....         | Westward.....         | 340             | 1                 | Pipe.     |
| Menominee street..... | Larrabee street.....          | Mohawk street.....    | 360             | 2                 | Pipe.     |
| Ohio street.....      | St. Clair street.....         | Eastward.....         | 400             | 2                 | Brick.    |
| Schiller street.....  | East of Astor street.....     | Lake Shore Drive..... | 150             | 1                 | Pipe.     |
| Schiller street.....  | Astor street.....             | Eastward.....         | 280             | 1 1/4             | Pipe.     |
| Sheffield avenue..... | Center street.....            | Garfield avenue.....  | 649             | 1                 | Pipe.     |
| Sheffield avenue..... | Webster avenue.....           | Garfield avenue.....  | 650             | 1                 | Pipe.     |

## WING SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE NORTH DIVISION.

| IN                       | FROM                           | TO                   | Length in feet. | Diameter in feet. | Material. |
|--------------------------|--------------------------------|----------------------|-----------------|-------------------|-----------|
| C street.....            | M. H. in Southport avenue..... | Westward.....        | 38              | 1½                | Pipe.     |
| Crooked street.....      | M. H. in Southport avenue..... | Eastward.....        | 38              | 1                 | Pipe.     |
| Hickory street.....      | M. H. in Division street.....  | Northward.....       | 46              | 1                 | Pipe.     |
| Hooker street.....       | M. H. in Division street.....  | North and south..... | 90              | 1                 | Pipe.     |
| Marcy street.....        | M. H. in Clybourn place.....   | Southward.....       | 70              | 1                 | Pipe.     |
| North Branch street..... | M. H. in Division street.....  | Northward.....       | 34              | 1½                | Pipe.     |
| Rees street.....         | M. H. in Division street.....  | Northeast.....       | 78              | 2½                | Brick.    |
| Ritchie place.....       | M. H. in Goethe street.....    | Northward.....       | 34              | 1                 | Pipe.     |
| Stone street.....        | M. H. in Goethe street.....    | Northward.....       | 35              | 1                 | Pipe.     |

## WING SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE SOUTH DIVISION.

| IN                      | FROM                                | TO             | Length in feet. | Diameter in feet. | Material. |
|-------------------------|-------------------------------------|----------------|-----------------|-------------------|-----------|
| Auburn street.....      | M. H. in Thirty-first street.....   | Southward..... | 40              | 2                 | Brick.    |
| Butler street.....      | M. H. in Thirty-seventh street..... | Northward..... | 46              | 1½                | Pipe.     |
| Butterfield street..... | M. H. in Thirty-third street.....   | Southward..... | 40              | 1                 | Pipe.     |
| Butterfield street..... | M. H. in Thirty-fifth street.....   | Northward..... | 38              | 1                 | Pipe.     |
| Fifth avenue.....       | M. H. in Thirty-seventh street..... | Southward..... | 40              | 2                 | Brick.    |
| Shields avenue.....     | M. H. in Thirty-seventh street..... | Southward..... | 40              | 1                 | Pipe.     |
| Stearns street.....     | M. H. in Main street.....           | Eastward.....  | 40              | 1                 | Pipe.     |
| Oxford court.....       | M. H. in Stanton avenue.....        | Westward.....  | 39              | 1                 | Pipe.     |

## WING SEWERS CONSTRUCTED DURING THE YEAR 1885 IN THE WEST DIVISION.

| IN                   | FROM                           | TO                     | Length in feet. | Diameter in feet. | Material. |
|----------------------|--------------------------------|------------------------|-----------------|-------------------|-----------|
| Blanche street.....  | M. H. in Ashland street.....   | Eastward.....          | 44              | 1                 | Pipe.     |
| Church court.....    | M. H. in Aberdeen street.....  | East and westward..... | 80              | 1                 | Pipe.     |
| Clarinda street..... | M. H. in Wood street.....      | Eastward.....          | 36              | 1                 | Pipe.     |
| Congress street..... | M. H. in Campbell avenue.....  | Westward.....          | 44              | 1 1/4             | Pipe.     |
| Cornelia street..... | M. H. in Wood street.....      | Eastward.....          | 41              | 1                 | Pipe.     |
| Court street.....    | M. H. in Leavitt street.....   | Westward.....          | 42              | 1                 | Pipe.     |
| Emily street.....    | M. H. in Wood street.....      | Eastward.....          | 39              | 1                 | Pipe.     |
| Idaho street.....    | M. H. in Polk street.....      | Northward.....         | 40              | 1                 | Pipe.     |
| Irving avenue.....   | M. H. in Polk street.....      | Northward.....         | 40              | 1                 | Pipe.     |
| Jane street.....     | M. H. in Wood street.....      | Eastward.....          | 38              | 1                 | Pipe.     |
| Mendel street.....   | M. H. in Clybourn place.....   | Northward.....         | 42              | 1 1/4             | Pipe.     |
| Polk street.....     | M. H. in Robey street.....     | Westward.....          | 28              | 1                 | Pipe.     |
| Polk street.....     | M. H. in Laffin street.....    | Westward.....          | 38              | 1                 | Pipe.     |
| Pratt street.....    | M. H. in Green street.....     | Westward.....          | 38              | 1                 | Pipe.     |
| Rockwell street..... | M. H. in Adams street.....     | North and south.....   | 102             | 1                 | Pipe.     |
| Rockwell street..... | M. H. in Monroe street.....    | Southward.....         | 54              | 1                 | Pipe.     |
| Twelfth street.....  | West line of Ogden avenue..... | Westward.....          | 28              | 1                 | Pipe.     |
| Wabansia avenue..... | M. H. in Ashland avenue.....   | Westward.....          | 53              | 1                 | Pipe.     |
| Wilcox street.....   | M. H. in Western avenue.....   | Eastward.....          | 32              | 1                 | Pipe.     |
| York street.....     | M. H. in Laffin street.....    | Westward.....          | 36              | 1                 | Pipe.     |
| York street.....     | M. H. in Hermitage avenue..... | Westward.....          | 38              | 1                 | Pipe.     |
| York street.....     | M. H. in Paulina street.....   | Eastward.....          | 50              | 1                 | Pipe.     |

## SEWERS AND CATCH-BASINS CLEANED IN THE THREE DIVISIONS DURING THE YEAR 1885.

| METHOD.  | SOUTH DIVISION. |            | WEST DIVISION. |             | NORTH DIVISION. |            | TOTALS.       |             | Average Cost per 100 feet. |
|--|-----------------|------------|----------------|-------------|-----------------|------------|---------------|-------------|----------------------------|
|  | Feet Cleaned.   | Cost.      | Feet Cleaned.  | Cost.       | Feet Cleaned.   | Cost.      | Feet Cleaned. | Cost.       |                            |
| Flushing. ....                                       | 210,470         | \$2,167 66 | 235,700        | \$ 1,938 75 | 194,519         | \$1,722 49 | 640,689       | \$ 5,828 90 | \$0 91                     |
| Iron Scraper. ....                                   | 134,998         | 4,063 06   | 154,458        | 4,429 94    | 104,949         | 2,380 30   | 394,405       | 10,873 30   | 2 76                       |
| Wood Scraper. ....                                   | 68,910          | 1,246 18   | 313,000        | 4,780 81    | 84,010          | 1,763 73   | 465,920       | 7,810 70    | 1 67                       |
| Totals. ....   | 414,378         | \$7,476 90 | 703,158        | \$11,149 50 | 383,478         | \$5,886 52 | 1,501,014     | \$24,512 92 | \$1 63                     |
|  | No. of          | Cost.      | No. of         | Cost.       | No. of          | Cost.      | No. of        | Cost.       | Average Cost per Basin.    |
| Catch-Basins Cleaned. ....                           | 5,567           | \$7,037 16 | 6,337          | \$ 9,966 92 | 3,546           | \$5,015 18 | 15,451        | \$23,019 26 | \$1 42                     |
| Total cost of cleaning Sewers and Catch-Basins. .... |                 |            |                |             |                 |            | \$46,532 18   |             |                            |





## SEWERAGE DEPARTMENT.

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SUMMARY OF RECEIPTS AND EXPENDITURES IN THE HOUSE DRAIN DEPARTMENT DURING  
THE YEAR 1885.

| DIVISIONS.  | PERMITS ISSUED. |           |           |        | RECEIPTS.    | EXPENDITURES. |
|---|-----------------|-----------|-----------|--------|--------------|---------------|
|   | 12 Inches.      | 9 Inches. | 6 Inches. | Total. |              |               |
| West.....   | 4               | 41        | 2,713     | 2,763  | \$ 14,008 00 |               |
| South.....  |                 | 26        | 907       | 934    | 4,783 50     |               |
| North.....  | 1               | 17        | 392       | 409    | 2,125 00     |               |
| Licenses, &c.....                                     |                 |           |           |        | 140 00       |               |
| Special Assessments.....                              |                 |           |           |        | 10,138 23    |               |
| Miscellaneous Credits.....                            |                 |           |           |        | 150 96       |               |
| Total.....  | 5               | 84        | 4,012     | 4,109  | \$ 31,344 69 |               |
| Superintendence, Inspection and Office Supplies.....  |                 |           |           |        |              | \$18,258 57   |
| Junctions set in new Sewers during the year 1885..... |                 |           |           |        |              | 4,491 85      |
| Surplus.....  |                 |           |           |        |              | 8,594 27      |
| Total.....  |                 |           |           |        |              | \$31,344 69   |

NUMBER OF HOUSE DRAINS PUT IN PLACE UNDER SPECIAL ASSESSMENT DURING THE YEAR 1885.

| DIVISIONS.                   | Total Num-<br>ber of<br>Drains. | Total<br>Length<br>in feet. | Total Cost. | Average<br>Cost per<br>Drain. | Average Length<br>per Drain in<br>feet. | Average<br>Cost per<br>foot. |
|------------------------------|---------------------------------|-----------------------------|-------------|-------------------------------|---|------------------------------|
| West.....                    | 1,044                           | 27,213                      | \$ 8,291 34 | \$ 7 94                       | 26.07                                   | 30c                          |
| South.....                   | 851                             | 22,863                      | 7,203 86    | 8 52                          | 26.87                                   | 32c                          |
| North.....                   | 821                             | 8,600                       | 3,677 05    | 11 46                         | 27.06                                   | 42c                          |
| Total and grand average..... | 2,216                           | 58,766                      | \$19,291 75 | \$ 8 52                       | 26.71                                   | 32c                          |

The following statement shows the value of the amount of material and stock on hand, and the unexpended balance standing to the credit of the sewerage fund January 1, 1886:

|                                  |             |
|----------------------------------|-------------|
| Sewer pipe.....                  | \$7,398 15  |
| Wooden covers and lumber...      | 3,279 44    |
| Iron covers.....                 | 3,000 50    |
| Brick.....                       | 311 60      |
| Cement.....                      | 106 80      |
| Sand.....                        | 95 00       |
| Stock (machinery, tools, etc.).. | 4,979 88    |
| Unexpended balance .....         | 12,294 47   |
| Total.....                       | \$31,465 84 |

During the year the 9-foot sewer in Armitage avenue has been extended from Hoyne avenue west to the city limits, thence south in Western avenue to within 300 feet of North avenue. An agreement was entered into with the village of Jefferson permitting them to connect lateral sewers with the Western avenue sewer to drain the south 480 acres of section 36, the same to pay the city ten thousand dollars (\$10,000), payable in ten annual installments with interest at 6 per cent., and to pay for the construction of all catch-basins needed along the west side of Western avenue, between Armitage avenue and North avenue, and 20 per cent. of cost of cleaning and maintaining the sewer from North avenue to its outfall at the river; and also



cedes to the city the right of way along the center of Western avenue from Armitage avenue to North avenue in perpetuity, the city retaining all permits to connect house drains with the Western avenue sewer, and requiring all lateral sewers to be constructed in accordance with the regulations and specifications governing sewers built in the city.

The 6-foot sewer in Douglas avenue has been extended from Long John street west to Archer avenue, and Archer avenue sewered from Wood street to city limits. This completes the sewerage of Archer avenue.

Very respectfully yours,

O. H. CHENEY,

*Supt. Bureau of Sewers.*

## BUREAU OF STREETS.

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DEPARTMENT OF PUBLIC WORKS; }  
BUREAU OF STREETS, }  
CHICAGO, December 31, 1885. }

DEWITT C. CREGIER,

*Commissioner of Public Works:*

DEAR SIR: I have the honor to submit herewith the Tenth (10th) Annual Report of the Bureau of Streets. It contains a general review of the work accomplished during the year.

The following tables show the progress made in street improvements, the character of pavement laid on each street, the total length in lineal feet, as well as surface measurement in square yards:

## STREETS IMPROVED

| STREETS.                         | FROM                      | TO                 | Commenced.     | Finished.     |
|----------------------------------|---------------------------|--------------------|----------------|---------------|
| Alley in Blk. 29 Carpenter's add | May street.....           | Ann street.....    | July 20        | July 23       |
| Alley bet. Jefferson & Des'p'n's | Washington street         | Randolph street.   | July 18        | July 20       |
| Alley bet. Park av. & Lake..     | Hoyne avenue...           | Leavitt street.... | April 25       | June 18       |
| Ashland avenue...                | Twelfth street....        | Twenty-second st   | Aug. 1, 1884   | Sept. 5, 1885 |
| Aberdeen street....              | Madison street....        | Harrison street..  | May 4          | June 1        |
| Augusta street....               | Milwaukee avenue          | Wood street.....   | Aug. 17        | Aug. 28       |
| Augusta street....               | Milwaukee avenue          | Elston avenue...   | July 25        | Aug. 3        |
| Ann street .....                 | Randolph street..         | Lake street. ....  | June 12        | July 14       |
| Adams street.....                | Western avenue..          | Rockwell street..  | May 25         | Aug. 15       |
| Adams street.....                | Hoyne avenue....          | Oakley avenue...   | July 9         | July 16       |
| Ashland avenue...                | Milwaukee avenue          | Clybourn place..   | Sept. 14       | Nov. 14       |
| Austin avenue....                | Desplaines street..       | May street.....    | July 29        | Sept. 18      |
| Brown street.....                | Maxwell street...         | Fourteenth street  | June 20        | July 25       |
| Blue Island avenue               | Harrison street...        | Viaduct.....       | May 19         | June 30       |
| W. Clybourn place                | N. Branch Chicago River.. | Ashland avenue.    | Aug. 22        | Aug. 28       |
| Congress street....              | Leavitt street....        | Hoyne avenue....   | Sept. 15, 1884 | May 8, 1885   |
| Canalport avenue..               | Canal street.....         | Halsted street...  | June 12        | June 28       |
| Chicago avenue...                | Milwaukee avenue          | Lessing street...  | May 2          | May 18        |
| Chicago avenue...                | Milwaukee avenue          | Ashland avenue.    | Aug. 3         | Oct. 19       |
| Campbell avenue..                | Madison street....        | Polk street.....   | Sept. 21       | Unfin's'd     |
| Campbell avenue..                | Leavitt street....        | Oakley avenue...   | Sept. 6        | Sept. 14      |
| Cornell street.....              | Milwaukee avenue          | Ashland avenue.    | Nov. 24        | Dec. 4        |
| *Congress street...              | Lincoln street....        | Hoyne avenue....   | Sept. 2, 1884  | May 9, 1885   |
| De Kalb street....               | Flournoy street...        | Leavitt street.... | July 20        | July 25       |
| Erie street.....                 | Curtis street.....        | N. Centre avenue   | Nov. 16        | Nov. 21       |
| Ewing street.....                | Halsted street....        | Blue Island av...  | May 21         | June 11       |
| Front street.....                | Elston avenue....         | Carpenter street.  | Oct. 26        | Nov. 6        |
| Fulton street.....               | Ashland avenue..          | Robey street....   | May 8          | June 5        |
| Fourteenth street..              | Canal street.....         | Blue Island av...  | May 14         | June 11       |
| Flournoy street....              | Ogden avenue....          | Leavitt street.... | .....          | Unfin's'd     |
| Green street.....                | Indiana street....        | Chicago avenue..   | June 29        | July 8        |
| Green street.....                | Madison street...         | Lake street.....   | June 30        | July 7        |
| Harrison (Except R.R.) street    | Ogden avenue....          | Hoyne avenue....   | Sept. 9, 1884  | May 30, 1885  |
| Harrison street...               | Hoyne avenue...           | Rockwell street..  | Sept. 5, 1884  | July 15, 1885 |
| Huron street.....                | Milwaukee avenue          | Ashland avenue.    | Aug. 1         | Aug. 21       |
| Hoyne avenue....                 | Harrison street...        | DeKalb street....  | Sept. 2        | Sept. 11      |
| Halsted street....               | Canalport avenue.         | Twenty-second st   | June 23        | June 27       |
| Halsted street....               | Randolph street..         | Indiana street...  | Aug. 1         | Aug. 19       |
| Hermitage avenue.                | Jackson street...         | Polk street.....   | Sept. 17       | Sept. 19      |
| Idaho street.....                | Van Buren street.         | Harrison street..  | May 8          | Sept. 6       |
| Leavitt street.....              | Ogden avenue....          | Twelfth street...  | Aug. 12        | Aug. 15       |
| Lafin street.....                | Harrison street...        | Taylor street....  | June 26        | Sept. 25      |
| Liberty street.....              | Canal street.....         | Jefferson street.. | Aug. 15        | Aug. 17       |
| Lincoln street....               | Congress street...        | Polk street.....   | Sept. 19       | Nov. 12       |
| Lytle street.....                | Taylor street....         | Twelfth street...  | May 4          | June 20       |
| May street.....                  | Chicago avenue..          | Fulton street....  | June 28        | July 17       |
| Milwaukee avenue.                | Union street.....         | Division street... | June 29        | July 21       |
| Milwaukee avenue.                | Division street...        | North avenue...    | June 11        | Oct. 30       |
| Monroe street....                | Ashland avenue..          | Robey street....   | June 11        | June 22       |

\*Total length of improvement 1,302.30 lineal feet, of which 600 feet was reported complete in 1884.



## WEST DIVISION.

| CONTRACTOR.                | NATURE OF IMPROVEMENT.     | Square<br>Yards. | Lineal<br>Feet. |
|----------------------------|----------------------------|------------------|-----------------|
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 277.50           | 250.00          |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 757.50           | 378.30          |
| James A. Sackley. ....     | Three-inch oak plank. .... |                  | 597.40          |
| R. F. Wilson. ....         | Macadam. ....              | 32,838.70        | 5,311.70        |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 10,603.67        | 2,395.30        |
| R. F. Conway. ....         | Cedar blocks. ....         | 12,491.61        | 2,863.50        |
| R. F. Conway. ....         | Cedar blocks. ....         | 4,340.70         | 968.10          |
| Watson & Perkins. ....     | Cedar blocks. ....         | 1,667.79         | 381.00          |
| R. F. Conway. ....         | Cedar blocks. ....         | 5,740.97         | 1,309.10        |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 6,177.62         | 1,329.90        |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 15,917.70        | 4,338.90        |
| Watson & Perkins. ....     | Cedar blocks. ....         | 15,529.25        | 2,702.40        |
| Geo. W. Wilson. ....       | Curb wall and fill. ....   |                  | 879.20          |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 25,279.92        | 5,970.00        |
| Olaf Vider. ....           | Cedar blocks. ....         | 3,332.50         | 753.20          |
| Bassler & Lansing. ....    | Cedar blocks. ....         | 2,674.88         | 603.60          |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 7,367.91         | 2,395.00        |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 6,174.40         | 1,195.20        |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 12,349.31        | 3,151.80        |
| Lyman, Labounty & Co. .... | Curbing. ....              |                  |                 |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 3,165.96         | 712.30          |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 10,629.99        | 2,420.70        |
| A. Jaicks. ....            | Macadam. ....              | 5,174.30         | 603.30          |
| R. F. Conway. ....         | Cedar blocks. ....         | 4,848.65         | 1,454.30        |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 3,489.70         | 631.80          |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 1,417.08         | 691.20          |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 3,305.27         | 727.60          |
| A. Jaicks. ....            | Cedar blocks. ....         | 11,389.01        | 2,475.30        |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 20,606.85        | 4,547.50        |
| Kinsella & O'Connor. ....  | Curb and fill. ....        |                  |                 |
| R. F. Conway. ....         | Cedar blocks. ....         | 6,228.71         | 1,252.50        |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 5,202.15         | 1,178.80        |
| A. Jaicks. ....            | Macadam. ....              | 2,815.50         | 1,897.80        |
| R. F. Conway. ....         | Macadam. ....              | 11,483.60        | 3,478.60        |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 17,199.17        | 3,662.80        |
| James A. Sackley. ....     | Cedar blocks. ....         | 3,044.13         | 695.70          |
| J. V. McAdam & Co. ....    | Cedar blocks. ....         | 1,932.05         | 698.10          |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 5,190.80         | 1,869.20        |
| A. J. McBean & Co. ....    | Cedar blocks. ....         | 6,874.84         | 1,950.90        |
| Wm. Kinsella. ....         | Curb stone and fill. ....  |                  | 736.30          |
| R. F. Conway. ....         | Cedar blocks. ....         | 2,794.11         | 619.00          |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 7,666.07         | 1,692.40        |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 1,818.44         | 739.30          |
| R. F. Conway. ....         | Curb stone and fill. ....  |                  | 940.00          |
| Wm. Kinsella. ....         | Curb stone and fill. ....  |                  | 652.00          |
| Olaf Vider. ....           | Cedar blocks. ....         | 14,167.10        | 3,123.60        |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 24,536.08        | 7,373.00        |
| Watson & Perkins. ....     | Cedar blocks. ....         | 12,385.85        | 4,113.10        |
| J. B. Smith & Co. ....     | Cedar blocks. ....         | 10,402.01        | 2,144.90        |
|                            | Carried Forward ...        | 361,289.35       | 90,353.60       |



## STREETS IMPROVED.

| STREETS.                    | FROM                | TO                      | Commenced. | Finished. |
|-----------------------------|---------------------|-------------------------|------------|-----------|
| Monroe street. ....         | Western avenue..    | Rockwell street..       | Sept. 17   | Sept. 30  |
| Madison street. ....        | Ashland avenue..    | Western avenue..        | July 10    | Aug. 13   |
| May street. ....            | Milwaukee avenue    | George street....       | Nov. 4     | Nov. 11   |
| Morgan street ....          | Randolph street..   | Lake street.....        | July 7     | July 9    |
| Ogden avenue.....           | Madison street....  | Randolph street..       | Nov. 18    | Nov. 25   |
| Polk street. ....           | Ogden avenue....    | Western Avenue          | July 8     | July 18   |
| Paulina street.....         | Division street.... | Milwaukee av....        | Sept. 26   | Sept. 30  |
| Paulina street.....         | Jackson street....  | Harrison street..       | Nov. 11    | Nov. 18   |
| Randolph street ...         | Halsted street ...  | Ogden avenue....        | Aug. 20    | Sept. 5   |
| Waverly (Throop st.) place. | Madison street....  | Washington st..         | June 17    | June 19   |
| Twenty-first street.        | Blue Island avenue  | Western avenue..        | June 29    | Unfin's'd |
| Union street.....           | Twelfth street....  | Meagher street..        | Aug. 7     | Aug. 17   |
| Van Buren street..          | Halsted street ...  | Loomis street... May 12 | June 11    |           |
| Western avenue...           | Lake street. ....   | Van Buren st....        | May 22     | June 30   |
| Walnut street.....          | Ashland ayenue...   | Western avenue..        | April 28   | June 5    |
| Winchester avenue           | Jackson street....  | Harrison street..       | Aug. 1     | Aug. 12   |
| Will street.....            | Milwaukee avenue    | Augusta street..        | Nov. 21    | Nov. 23   |
| Wood street.....            | Indiana street'.... | Chicago avenue..        | Nov. 23    | Unfin's'd |
| Warren avenue....           | Ogden avenue....    | Leavitt street....      | Oct. 1     | Nov. 26   |

## WEST DIVISION—CONTINUED.

| CONTRACTOR.                | NATURE OF IMPROVEMENT.   | Square<br>Yards. | Lineal<br>Feet. |
|----------------------------|--------------------------|------------------|-----------------|
|                            | Brought forward.....     | 361,289.35       | 90,353.60       |
| Watson & Perkins.....      | Cedar blocks.....        | 5,908.57         | 1,346.30        |
| J. V. McAdam & Co.....     | Cedar blocks.....        | 17,920.63        | 5,137.30        |
| A. J. McBean & Co.....     | Cedar blocks.....        | 2,829.40         | 637.00          |
| A. J. McBean & Co.....     | Cedar blocks.....        | 1,647.23         | 379.80          |
| A. J. McBean & Co.....     | Cedar blocks.....        | 5,261.54         | 1,042.00        |
| R. F. Conway.....          | Cedar blocks.....        | 9,662.96         | 2,092.90        |
| J. B. Smith & Co.....      | Cedar blocks.....        | 3,045.40         | 1,465.20        |
| R. F. Conway.....          | Cedar blocks.....        | 3,680.91         | 1,058.70        |
| J. B. Smith & Co.....      | Cedar blocks.....        | 16,863.77        | 4,356.90        |
| A. J. McBean & Co.....     | Cedar blocks.....        | 1,835.20         | 394.20          |
| R. F. Conway.....          | Curb stone and fill..... |                  |                 |
| J. B. Smith & Co.....      | Cedar blocks.....        | 8,816.29         | 1,959.60        |
| Olaf Vider.....            | Cedar blocks.....        | 10,198.25        | 3,792.30        |
| A. J. McBean & Co.....     | Cedar blocks.....        | 7,481.34         | 2,800.90        |
| Olaf Vider.....            | Cedar blocks.....        | 21,025.15        | 4,997.20        |
| A. Jaicks.....             | Cedar blocks.....        | 4,670.64         | 1,047.00        |
| J. B. Smith & Co.....      | Cedar blocks.....        | 2,188.91         | 498.50          |
| J. V. McAdam Co.....       | Cedar blocks.....        |                  |                 |
| Barber Asphalt Paving Co.. | Sheet asphalt.....       | 18,913.75        | 4,308.50        |
|                            | Totals.....              | 503,239.29       | 127,667.90      |

Total miles, 24 $\frac{18}{100}$ .

## STREETS IMPROVED.

| STREETS.                       | FROM                        | TO                         | Commenced.     | Finished.    |
|--------------------------------|-----------------------------|----------------------------|----------------|--------------|
| Alley N.W. 1-4 bk. 90 S.S. add | Bet. Van B'n & Congress sts | and west to Market street. | May 14         | May 26       |
| Alley bet State st & Wabash av | Van Buren street..          | Eldridge court...          | June 16        | Aug. 24      |
| Alley bet Clark st. & 4th av.  | Madison street....          | Taylor street....          | Aug. 17        | Sept. 12     |
| Alley Prairie and Indiana avs  | Eighteenth street..         | Twentieth street..         | Nov. 21        | Unfinish'd   |
| Alley Calumet and Prairie avs  | Twentieth street..          | Twenty-First st..          | Nov. 14        | Dec. 1       |
| Alley Wabash and Mich. avs.    | Jackson street....          | Van Buren street           | June 16        | July 24      |
| Alley Wabash and Mich. avs.    | Madison street....          | Washington st...           | July 29        | Aug. 22      |
| Archer avenue.....             | State street.....           | Halsted street....         | June 8         | July 31      |
| Ashland avenue....             | C. A. & St. L. R. R.        | So. Branch Chicago River   | Aug. 1         | Dec. 31      |
| Butterfield street..           | Sixteenth street...         | Twenty-second st           | March 3        | April 10     |
| Calhoun place.....             | Clark street.....           | Dearborn street..          | June 22        | July 5       |
| Dearborn street....            | Thirty-Third st...          | Egan avenue....            | Oct. 15        | Unfinish'd   |
| Dearborn street....            | Randolph.....               | Madison street..           | May 27         | July 8       |
| Dearborn street....            | Intersection of Wa          | shington street..          | Nov. 7         | Nov. 21      |
| Dearborn street....            | Jackson street....          | Polk street.....           | Aug. 29        | Sept. 17     |
| Douglas avenue....             | L. S. & M. S. Ry..          | Michigan avenue            | Sept. 10       | Nov. 2       |
| *Groveland avenue              | Thirty-First street         | 334 feet north ...         | Nov. 13        | Nov. 16      |
| Johnson street....             | Thirty-Seventh st.          | Thirty-eighth st..         | June 29        | July 26      |
| Monroe street.....             | State street.....           | Clark street.....          | July 17        | Sept. 21     |
| Main street.....               | Thirty-First street         | So. Branch Chicago river   | Nov. 12        | Dec. 3       |
| Peck court.....                | State street.....           | Michigan avenue            | Aug. 19        | Oct. 24      |
| Portland avenue....            | Twenty-Sixth st..           | Thirty-first street        | Oct. 2         | Oct. 16      |
| Pitney street.....             | Thirty-First street         | Archer avenue....          | Dec. 1         | Unfinish'd   |
| Quincy street.....             | La Salle street....         | Franklin street..          | May 1          | June 13      |
| Rhodes avenue....              | Thirty-First street         | So line lot 1, as'n'd div. | Nov. 18        | Unfinish'd   |
| Sixteenth street...            | State street.....           | Michigan avenue            | July 28        | Sept. 28     |
| Sixteenth street...            | Michigan avenue..           | Prairie avenue....         | Oct. 26        | Nov. 20      |
| *East half State st.           | Jackson street....          | Van Buren street           | Nov. 2         | Nov. 21      |
| Stanton avenue....             | Douglas avenue..            | Egan avenue....            | Oct. 1         | Oct. 26      |
| Thirty-First street            | Halsted street....          | Pitney court....           | Nov. 27        | Unfinish'd   |
| Twenty-First street            | State street.....           | Archer avenue....          | July 16        | Sept. 9      |
| Twenty-Fourth st..             | State street.....           | Hanover street...          | Nov. 2         | Unfinish'd   |
| Thirty-Fourth st..             | State street.....           | Indiana avenue..           | July 15        | Sept. 10     |
| Thirty-Third street            | L. S. & M. S. Ry..          | State street.....          | June 23        | Sept. 2      |
| Thirty-Third street            | State street.....           | South Park av...           | Sept. 9        | Oct. 29      |
| Thirty-Second st..             | South Park av...            | Cottage Grove av           | Oct. 24, 1884  | May 30, 1885 |
| Thirty-Seventh st..            | Vincennes avenue            | Cottage Grove av           | Nov. 9         | Unfin's'd    |
| Twenty-Fifth st...             | State street.....           | Wabash avenue..            | Nov. 11        | Nov. 14      |
| Thirty-Seventh st..            | State street.....           | Halsted street...          | Sept. 18       | Oct. 28      |
| Twenty-Second st.              | State street.....           | La Salle street..          | June 23        | June 27      |
| Vernon avenue....              | Douglas avenue..            | Thirty-seventh st          | Sept. 7        | Oct. 20      |
| Vernon avenue....              | Thirty-First street         | Douglas avenue..           | Sept. 15, 1884 | May 23, 1885 |
| Wabash avenue....              | Madison street....          | Jackson street...          | May 7          | June 27      |
| Wabash avenue....              | Jackson street...           | Harrison street..          | June 5         | Aug. 15      |

\*Work done under private contract.



## DIVISION.

| CONTRACTOR.       | NATURE OF IMPROVEMENT.      | Square<br>Yards. | Lineal<br>Feet. |
|-------------------|-----------------------------|------------------|-----------------|
| Adam & Co.        | Granite.                    | 264.26           | 148.60          |
| Donlan.           | Medina stone.               | 5,758.07         | 2,006.80        |
| Smith & Co.       | Cedar blocks.               | 2,441.45         | 1,573.60        |
| Thatcher          | Asphalt blocks.             |                  |                 |
| Donlan.           | Asphalt blocks.             | 821.45           | 373.30          |
| McMahon           | Granite.                    | 692.49           | 346.20          |
| Donway.           | Granite.                    | 973.29           | 330.60          |
| Thatcher.         | Cedar blocks.               | 24,615.19        | 5,868.00        |
| Labounty & Co.    | Cinderling.                 |                  | 1,913.00        |
| Wilson.           | Curbing and filling.        |                  | 2,363.10        |
| McMahon.          | Granite.                    | 646.18           | 323.10          |
| Wilson.           | Macadam.                    |                  |                 |
| Adam & Co.        | Granite.                    | 4,250.71         | 896.00          |
| Donlan.           | Haydenville Hollow Tile Co. | 600.92           |                 |
| Smith & Perkins   | Cedar blocks.               | 11,651.40        | 2,125.30        |
| Wilson.           | Macadam.                    | 6,802.90         | 1,394.80        |
| Smith & Co.       | Cedar blocks.               | 1,672.00         | 396.00          |
| C. Duffy          | Cedar blocks.               | 1,353.00         | 575.50          |
| Adam & Co.        | Granite.                    | 3,377.28         | 753.50          |
| Donway.           | Cedar blocks.               | 17,576.68        | 4,060.80        |
| Smith.            | Macadam.                    | 3,104.20         | 700.70          |
| Smith & Co.       | Cedar blocks.               | 11,611.16        | 2,592.30        |
| Donway.           | Curb wall and fill.         |                  |                 |
| Donlan            | Granite.                    | 2,390.91         | 646.50          |
| Wilson.           | Macadam.                    |                  |                 |
| Peterson.         | Granite.                    | 2,109.65         | 696.10          |
| Peterson.         | Macadam.                    | 2,598.50         | 834.00          |
| Der.              | Granite.                    | 1,190.40         | 232.50          |
| Bean & Co.        | Cedar blocks.               | 6,372.54         | 2,495.60        |
| Bean & Co.        | Cedar blocks.               |                  |                 |
| Peterson.         | Macadam.                    | 4,359.40         | 1,049.40        |
| Smith & O'Connor. | Curb wall and fill.         |                  |                 |
| Smith.            | Macadam.                    | 4,548.00         | 1,026.00        |
| Smith.            | Macadam.                    | 3,256.60         | 707.90          |
| Adam & Co.        | Macadam.                    | 9,578.90         | 2,152.60        |
| Thatcher.         | Macadam.                    | 4,222.20         | 1,000.00        |
| Thatcher.         | Macadam.                    |                  |                 |
| Smith & Co.       | Cedar blocks.               | 1,525.85         | 349.60          |
| Peterson.         | Cedar blocks.               | 23,207.20        | 5,062.10        |
| Smith & Co.       | Cedar blocks.               | 4,597.83         | 1,003.50        |
| Wilson.           | Macadam.                    | 5,337.00         | 1,254.90        |
| Wilson.           | Macadam.                    | 9,164.50         | 2,598.00        |
| A. Sackley.       | Granite.                    | 7,668.20         | 1,448.30        |
| Adam & Co.        | Granite.                    | 6,820.25         | 1,326.00        |
|                   | Total.                      | 196,650.56       | 52,624.20       |

Total miles, 9.97.



## STREETS IMPROVED,

| STREET.                        | FROM               | TO                       | Commenc'd.   | Finished. |
|--------------------------------|--------------------|--------------------------|--------------|-----------|
| *Alley bt State st & D'rb'n av | Elm street.....    | 100 feet north....       | June 6       | June 8    |
| Beethoven place...             | Wells street.....  | Sedgwick street..        | June 5       | June 11   |
| Clybourn place...              | Clybourn avenue..  | N. Branch Chicago river. | July 15      | July 25   |
| Clark street.....              | Division street... | North avenue ...         | Aug. 22      | Sept. 7   |
| Division street...             | Clark street ....  | Sedgwick street..        | June 11      | June 24   |
| Elm street.....                | La Salle street... | Wells street.....        | Nov. 30      | Dec. 3    |
| Garfield avenue...             | Clark street.....  | Sedgwick street..        | Aug. 28      | Sept. 4   |
| Garfield avenue...             | Sedgwick street..  | Halsted street...        | Oct. 28      | Nov. 10   |
| Goethe street.....             | Wells street.....  | Lake shore drive..       | June 3       | June 23   |
| Hurlbut street.....            | North avenue...    | Fullerton avenue         | May 26       | Aug. 11   |
| *Huron street.....             | Pine street.....   | St. Clair street...      | June 4       | June 8    |
| Illinois street.....           | Clark street.....  | Franklin street..        | May 14       | May 25    |
| Locust street.....             | Clark street.....  | La Salle avenue..        | Dec. 1, 1884 | May 6     |
| Ontario street.....            | Clark street.....  | Franklin street..        | Sept. 14     | Sept. 17  |
| Oak street.....                | Wells street.....  | Franklin street..        | Oct. 28      | Nov. 9    |
| *Oak street.....               | Franklin street... | Larrabee street..        | Oct. 14      | Oct. 28   |
| East Pearson street            | East terminus....  | West terminus...         | Sept. 16     | Sept. 29  |
| Southport avenue..             | Clybourn place...  | Fullerton avenue         | June 1       | Sept. 5   |
| Sigel street.....              | Wells street.....  | Sedgwick street..        | May 13       | May 30    |
| Schiller street....            | Clark street.....  | Wells street.....        | Nov. 17      | Nov. 20   |
| Sedgwick street...             | Lincoln avenue...  | Belden avenue...         | May 29       | July 28   |
| Willow street.....             | Clybourn avenue..  | Larrabee street..        | May 23       | June 8    |
| Webster avenue...              | North Park avenue  | Halsted street...        | Oct. 19      | Nov. 2    |
| Wendell street....             | Wells street.....  | Sedgwick street..        | June 13      | July 18   |
| Walton street.....             | Dearborn avenue.   | North State street       | Nov. 5       | Nov. 10   |
|                                |                    |                          |              |           |

\*Work done under private contract.

## NORTH DIVISION.

| CONTRACTOR.                 | NATURE OF IMPROVEMENT.                     | Square<br>Yards. | Lineal<br>Feet. |
|-----------------------------|--|------------------|-----------------|
| J. B. Smith & Co.....       | Cedar blocks.....                          | 147.78           | 100.00          |
| Olaf Vider.....             | Cedar blocks.....                          | 3,324.02         | 981.00          |
| Lyman, Labounty & Co.....   | Cedar blocks.....                          | 6,422.55         | 1,432.40        |
| J. V. McAdam.....           | Cedar blocks.....                          | 9,931.50         | 2,668.70        |
| Olaf Vider.....             | Cedar blocks.....                          | 4,384.98         | 1,660.20        |
| Olaf Vider.....             | Cedar blocks.....                          | 1,468.95         | 360.60          |
| J. V. McAdam & Co.....      | Cedar blocks.....                          | 1,556.07         | 386.00          |
| J. B. Smith.....            | Cedar blocks.....                          | 8,214.39         | 2,404.00        |
| Watson & Perkins ..         | Cedar blocks.....                          | 6,830.49         | 1,878.20        |
| J. & P. White.....          | Curbstone and fill .....                   |                  | 5,297.00        |
| Olaf Vider.....             | Square cedar blocks laid close together... | 1,406.53         | 301.40          |
| J. B. Smith & Co.....       | Cedar blocks.....                          | 5,091.20         | 978.30          |
| A. Jaicks.....              | Cedar blocks.....                          | 1,287.19         | 323.00          |
| J. B. Smith & Co.....       | Cedar blocks.....                          | 3,503.88         | 997.30          |
| Olaf Vider.....             | Cedar blocks.....                          | 1,298.31         | 364.90          |
| Olaf Vider.....             | Cedar blocks.....                          | 8,204.01         | 1,847.60        |
| Olaf Vider.....             | Cedar blocks.....                          | 5,331.37         | 1,434.80        |
| James Kricade.....          | Curbstone and fill.....                    |                  | 2,660.40        |
| J. & P. White.....          | Curbstone and fill.....                    |                  | 985.80          |
| J. B. Smith & Co.....       | Cedar blocks.....                          | 2,113.20         | 666.60          |
| Watson & Perkins.....       | Cedar blocks.....                          | 6,000.00         | 1,538.90        |
| J. B. Smith & Co.....       | Cedar blocks.....                          | 11,869.98        | 2,563.10        |
| J. V. McAdam & Co.....      | Cedar blocks.....                          | 11,383.54        | 3,007.20        |
| Olaf Vider.....             | Curb wall and fill.....                    |                  | 1,012.70        |
| Barber Asphalt Paving Co... | Sheet asphalt.....                         | 1,218.00         | 357.50          |
|                             | Total.....                                 | 100,987.94       | 36,257.10       |

6.87 Miles.

SUMMARY OF MILES OF STREETS IMPROVED.

| PAVEMENT.           | North Division. | South Division. | West Division. | Total Miles. |
|---------------------|-----------------|-----------------|----------------|--------------|
| Cedar Blocks.....   | 4.92            | 4.96            | 20.60          | 30.47        |
| Sheet Asphalt.....  | .07             | .....           | .82            | .89          |
| Macadam.....        | .....           | 2.41            | 2.14           | 4.55         |
| Asphalt Blocks..... | .....           | .07             | .....          | .07          |
| Medina Stone.....   | .....           | .....           | .....          | .88          |
| Granite Blocks..... | .....           | 1.85            | .....          | 1.85         |
| Cinderling.....     | .....           | .86             | .....          | .86          |
| Curbing.....        | 1.88            | .45             | .61            | 2.94         |
| Planing.....        | .....           | .....           | .11            | .11          |
| Total miles.....    | 6.87            | 9.97            | 24.18          | 41.02        |

THE FOLLOWING SHOWS THE KIND OF PAVING IN EACH DIVISION OF THE CITY, AT THE CLOSE OF THE YEAR.

|                     | Wooden Blocks. | Macadam. | Medina Stone. | Granite Stone. | Asphalt Blocks. | Sheet Asphalt. | Graveling. | Cinderling. | Grand Total Miles. |
|---------------------|----------------|----------|---------------|----------------|-----------------|----------------|------------|-------------|--------------------|
| North Division..... | 40.85          | .92      | .49           | .04            | .....           | 1.97           | .38        | 1.26        | 45.76              |
| South Division..... | 51.20          | 6.54     | 4.15          | 5.84           | 3.88            | .15            | 4.88       | .86         | 76.90              |
| West Division.....  | 98.30          | 19.40    | .89           | ..             | .....           | .83            | 2.64       | 7.85        | 134.40             |
| Total .....         | 185.35         | 26.86    | 5.08          | 5.88           | 3.88            | 2.94           | 7.95       | 9.47        | 345.96             |

The total number of miles of pavement laid each year, from the introduction of street paving in 1855 to the present date, is given in the following review:

| YEAR.      | Number<br>of Miles. | YEAR.                  | Number<br>of Miles. |
|------------|---------------------|------------------------|---------------------|
| 1855.....  | 1.72                | 1871.....              | 25.63               |
| 1856.....  | .26                 | 1872.. ..              | 1.82                |
| 1857.....  | 2.62                | 1873.....              | 10.19               |
| 1858.....  | 7.20                | 1874.....              | 9.07                |
| 1859.....  | 5.70                | 1875... ..             | 11.49               |
| 1860.....  |                     | 1876.....              | 10.50               |
| 1861... .. | .69                 | 1877.....              | 12.29               |
| 1862.....  | 2.57                | 1878.....              | 11.01               |
| 1863.....  | 2.00                | 1879.....              | 6.83                |
| 1864.....  | 2.40                | 1880.....              | 16.84               |
| 1865... .. | 2.03                | 1881.....              | 24.52               |
| 1866.....  | 8.87                | 1882... ..             | 24.95               |
| 1867.....  | 11.37               | 1883.....              | 22.49               |
| 1868.....  | 5.46                | 1884.....              | 34.52               |
| 1869.....  | 18.32               | 1885.....              | 38.06               |
| 1870.....  | 19.96               | Total number of miles. | 351.38              |

Of this amount 105.42 miles has been repaved during the same period, which reduces the actual amount of improved streets within the corporate limits at this date to 245.96 miles.



The following table shows in detail the amount of lumber used by the division foremen in the repairs and construction of aprons, culverts, crossings, sidewalk intersections, sidewalks and general repairs, to which is added the amount of lumber used in the construction of sidewalks, for which special assessments were levied:

| FOR WHAT USED.                | SOUTH DIVISION. |                    |                   |       | WEST DIVISION. |                    |                   |       | NORTH DIVISION. |                    |                   |       |
|-------------------------------|-----------------|--------------------|-------------------|-------|----------------|--------------------|-------------------|-------|-----------------|--------------------|-------------------|-------|
|                               | No.             | LUMBER.            |                   |       | No.            | LUMBER.            |                   |       | No.             | LUMBER.            |                   |       |
|                               |                 | No. Feet.<br>PINE. | No. Feet.<br>OAK. |       |                | No. Feet.<br>PINE. | No. Feet.<br>OAK. |       |                 | No. Feet.<br>PINE. | No. Feet.<br>OAK. |       |
| Aprons.....                   | 1332            | 70,038             | .....             | 1736  | 212,590        | .....              | .....             | 624   | 21,876          | .....              | .....             | ..... |
| Crossings.....                | 373             | 53,472             | .....             | 1421  | 238,356        | .....              | 3,233             | 174   | 20,968          | .....              | 281               | ..... |
| Culverts.....                 | 139             | 64,664             | .....             | 510   | 151,743        | .....              | .....             | 12    | 1,581           | .....              | .....             | ..... |
| Drain Boxes.....              | 26              | 2,176              | .....             | 128   | 18,136         | .....              | .....             | 19    | 2,007           | .....              | .....             | ..... |
| Steps and Railings.....       | 33              | 3,962              | .....             | 71    | 13,493         | .....              | .....             | 205   | 5,476           | .....              | .....             | ..... |
| Sidewalk General Repairs..... | .....           | 18,006             | .....             | ..... | 148,339        | .....              | .....             | ..... | 26,269          | .....              | .....             | ..... |
| Sidewalk Intersections.....   | 317             | 92,499             | .....             | 504   | 283,335        | .....              | .....             | 300   | 37,094          | .....              | .....             | ..... |
| General Repairs.....          | .....           | 80,041             | 14,058            | ..... | 36,419         | .....              | .....             | ..... | 9,519           | .....              | 14,754            | ..... |
| Street Permits.....           | .....           | 1,249              | .....             | ..... | 15,172         | .....              | .....             | ..... | .....           | .....              | .....             | ..... |
| Gas Companies.....            | .....           | .....              | .....             | ..... | 626            | .....              | .....             | ..... | .....           | .....              | .....             | ..... |
| Water Department.....         | .....           | .....              | .....             | ..... | 2,461          | .....              | .....             | ..... | .....           | .....              | .....             | ..... |
| Total No. Feet.....           | .....           | 386,107            | 14,058            | ..... | 1,120,670      | .....              | 3,233             | ..... | 124,790         | .....              | 15,035            | ..... |

## RECAPITULATION.

|  |                 |
|--|-----------------|
| Total amount of Pine Lumber.....   | 1,631,567 Feet. |
| Total amount of Oak Lumber.....  | 32,326 "        |
| To which is added the amount of Lumber used in constructing Side-walks under Special Assessment..... | 1,072,519 "     |
| Grand Total.....   | 2,736,412 Feet. |

The amount of repaving done by the division foremen, in the work of repairing improved streets, the replacing of pavements, where openings were made by Gas Companies, Water and Sewerage Departments and on account of street permits, is given in the following:

| FOR WHAT PURPOSE.     | SOUTH DIV.  | WEST DIV.   | NORTH DIV.  |
|-----------------------|-------------|-------------|-------------|
|                       | Square Yds. | Square Yds. | Square Yds. |
| General Repairs.....  | 14,572      | 15,433      | 6,738       |
| Gas Companies.....    | 419         | 182         | 65          |
| Water Department..... | 1,186       | 750         | 254         |
| Sewer Department..... | 210         | 887         | 65          |
| Street Permits.....   | 2,084       | 2,540       | 1,116       |
| Total .....           | 18,471      | 19,792      | 8,238       |

### UNIMPROVED STREETS.

In the work of grading and ditching, the unimproved streets have been kept in a good, passable condition. The total length of streets graded and ditched by the division foremen amounts in the aggregate to about 390 miles.

The following streets were planked (all of the materials used being furnished by property-owners in the localities mentioned):

|  |          |
|--|----------|
| Quarry street, from Archer avenue north, | 300 feet |
| Ullman " " 35th street south.....        | 400 feet |
| 35th " " So. Branch west....             | 200 feet |
| Total.....                               | 900 feet |

The department also repaired the planking on North Halsted street from viaduct approach to North Branch Canal, and constructed a plank roadway on Chicago avenue from Pine street east for North Pumping Works.

### IMPROVED STREETS.

The contract for sweeping and cleaning the improved streets was awarded to Messrs. Cooper & Walsh, on April 22d. The work of cleaning commenced on April 23d and was drawn to a close December 4th. The contract price per mile was \$35.00 and the total cost of the work under the contract amounted to \$91,926.45. The number of miles cleaned each month is shown in the following:

| MONTH.       | NO. OF MILES. | MONTH.             | NO. OF MILES. |
|--------------|---------------|--------------------|---------------|
| April .....  | 100.78        | September .....    | 357.99        |
| May .....    | 363.27        | October .....      | 350.92        |
| June .....   | 350.56        | November .....     | 351.09        |
| July .....   | 351.24        | December .....     | 46.38         |
| August ..... | 354.24        | Total No. Miles... | 2626.47       |

General average per month 358.32 miles.

In addition to the above 47 miles of macadam streets were scraped and cleaned by the division foremen.



## PERMITS FOR OPENING STREETS.

Fourteen hundred and seventy-nine (1,479) permits were issued to sundry parties, to open improved streets. A sufficient amount of cash was deposited on each permit to cover costs of replacing pavements, etc.

Fourteen hundred and forty (1,440) permits were issued to gas companies and sundry other companies to open improved streets, on which no cash deposits were made. The work of replacing pavements being done by contractors employed by the companies, subject to inspection and the acceptance of the department. A summary is given herewith:

PERMITS ISSUED UPON WHICH CASH DEPOSITS  
WERE MADE.

| MONTH.       | NO. ISSUED. | MONTH.          | NO. ISSUED. |
|--------------|-------------|-----------------|-------------|
| January..... | 18          | August.....     | 172         |
| February ... | 94          | September ..... | 147         |
| March .....  | 80          | October.....    | 151         |
| April .....  | 118         | November.....   | 122         |
| May .....    | 193         | December.....   | 56          |
| June.....    | 177         | Total .....     | 1,479       |
| July .....   | 151         |                 |             |

|  |                         |
|--|-------------------------|
| Number of permits issued for opening improved streets on which cash deposits were made.....                          | 1,479                   |
| Number of permits issued for opening improved streets by gas companies, etc., on which no cash deposits were made... | 1,440                   |
| Total number on improved streets ....  | 2,919                   |
| Number of permits issued for opening unimproved streets.....   | 2,602                   |
| Grand Total.....   | 5,521                   |
| General average per month.....   | 460                     |
| Amount of cash on deposit<br>December 31, 1884.....  | \$ 1,720 00             |
| Total amount of cash deposits made during 1885.....  | 24,463 15               |
| Amount retained by city for costs of repaving and inspection.....  | \$ 8,206 19             |
| Amount rebated to depositors   | 14,106 96               |
| Amount of cash on deposit<br>December 31st, 1885...  | 3,870 00                |
| Totals.....  | \$26,183 15 \$26,183 15 |
| Average amount of cash deposit .....   | \$16 75                 |
| Average amount retained for costs.....   | 5 82                    |

#### PERMITS FOR OBSTRUCTION OF STREETS.

Nine hundred and thirty (930) permits were issued to sundry parties to occupy streets for the purpose of depositing materials thereon during the construction

of buildings (which includes 29 permits issued to roofers). The number of permits issued each month, the amount of cash deposits and revenue received for use of streets is given in the following statement:

| MONTH.        | NO. ISSUED. | MONTH.         | NO. ISSUED. |
|---------------|-------------|----------------|-------------|
| January.....  | 13          | August.....    | 98          |
| February..... | 13          | September..... | 94          |
| March.....    | 68          | October.....   | 93          |
| April.....    | 84          | November.....  | 81          |
| May.....      | 105         | December.....  | 36          |
| June.....     | 148         | Total.....     | 930         |
| July.....     | 97          |                |             |

Average number issued each month..... 78

Amount of cash on deposit

December 31, 1884..... \$2,297 75

Total amount of cash deposits

made during 1885..... 9,970 20

Amount retained for use of  
street as per Sec. 1,104

Municipal Code.....\$ 3,811 20

Amount rebated to depositors 5,356 00

Amount of cash on deposit

December 31, 1885..... 3,100 75

Total.....\$12,267 95 \$12,267 95

Average amount of cash deposits.....\$10 77

Average amount retained for use of street.... 4 22



## PARKS.

In the work of taking care of the parks all of the money at the disposal of the department was used in maintaining, including the repairing and constructing of fences, painting outhouses, seats, fountains, bridges, lamp-posts, etc. Also the construction of sidewalk and planting of trees in and around Union square. The amount of money expended in each case is shown in the book-keeper's financial statement.

Union and Jefferson parks were transferred to the West Chicago Park Commissioners by an ordinance passed by the City Council October 9th, 1885, and accepted by said Park Commissioners on October 12, 1885.

Vernon Park was transferred by ordinance passed October 12th, and Wicker Park under date of October 26, 1885; both of which were accepted by the West Chicago Park Commissioners in a communication to the City Council dated November 9, 1885.

## HOUSE MOVING.

Licenses were issued to 48 house-movers. During the year 693 permits were granted to move buildings. Of this number 670 were of frame, and 23 brick buildings, the total frontage aggregating 14,267 lineal feet. A general review of the work apportioned by divisions, The number of buildings moved each month, and the cash receipts from this source is shown in the following tabulated statement:



| MONTH.         | No.<br>Permits. | CASH<br>RECEIPTS. | Frame. | Brick. | DIVISION. |        |       | HEIGHTS.    |             |             |             | FEET<br>FRONTAGE. | Average<br>Frontage. |
|----------------|-----------------|-------------------|--------|--------|-----------|--------|-------|-------------|-------------|-------------|-------------|-------------------|----------------------|
|                |                 |                   |        |        | North.    | South. | West. | 1<br>Story. | 2<br>Story. | 3<br>Story. | 4<br>Story. |                   |                      |
| January.....   | 13              | \$ 65 00          | 10     | 8      | 1         | 2      | 10    | 10          | 2           | 1           | ....        | 277               | 21.30                |
| February.....  | 21              | 105 00            | 20     | 1      | 4         | 3      | 14    | 13          | 7           | 1           | ....        | 411               | 19.52                |
| March.....     | 75              | 375 00            | 73     | 2      | 8         | 17     | 50    | 31          | 43          | 1           | ....        | 1,655             | 22.06                |
| April.....     | 107             | 535 00            | 107    | ....   | 20        | 11     | 76    | 55          | 49          | 3           | ....        | 2,122             | 19.83                |
| May.....       | 135             | 675 00            | 132    | 3      | 34        | 19     | 92    | 75          | 57          | 2           | 1           | 2,756             | 20.41                |
| June.....      | 69              | 345 00            | 69     | ....   | 13        | 16     | 40    | 27          | 35          | 7           | ....        | 1,457             | 21.11                |
| July.....      | 60              | 300 00            | 58     | 2      | 9         | 11     | 40    | 24          | 35          | 1           | ....        | 1,272             | 21.20                |
| August.....    | 41              | 205 00            | 40     | 1      | 13        | 8      | 20    | 19          | 21          | 1           | ....        | 844               | 20.58                |
| September..... | 57              | 285 00            | 55     | 2      | 9         | 10     | 38    | 28          | 26          | 3           | ....        | 1,157             | 20.29                |
| October.....   | 48              | 240 00            | 45     | 3      | 5         | 7      | 36    | 21          | 27          | ....        | ....        | 962               | 20.00                |
| November.....  | 41              | 205 00            | 37     | 4      | 7         | 9      | 25    | 18          | 23          | ....        | ....        | 845               | 20.60                |
| December.....  | 26              | 130 00            | 24     | 2      | 4         | 5      | 17    | 15          | 11          | ....        | ....        | 509               | 19.57                |
| Totals.....    | 693             | \$3,465 00        | 670    | 23     | 127       | 118    | 448   | 836         | 336         | 20          | 1           | 14,267            | 20.59                |

## STREET LAMPS.

For a report in detail of the work accomplished under this head, your attention is respectfully called to the following report of Superintendent Stewart:

CHICAGO, December 31, 1885.

MR. L. E. MCGANN,

*Superintendent of Streets:*

DEAR SIR: I herewith present my Annual Report of street lamps for the year 1885. At the close of the year there was, including those on bridges, viaducts, parks and boulevards, 14,569 gas-lamps, and 3,641 oil lamps in the city, as follows, to-wit:

## GAS LAMPS.

| DIVISION.  | No. in City<br>Jan. 1st, 1885. | No. Erected<br>during year 1885. | TOTAL. |
|------------|--------------------------------|----------------------------------|--------|
| West.....  | 7,558                          | 594                              | 8,152  |
| South..... | 3,586                          | 223                              | 3,809  |
| North..... | 2,549                          | 59                               | 2,608  |
| Total..... | 13,693                         | 876                              | 14,569 |

## OIL LAMPS.

| DIVISION.  | No. in City<br>Jan. 1st, 1885. | No. Erected<br>during year<br>1885. | Total. | Less number<br>discontinued<br>where gas<br>mains have<br>been laid dur-<br>ing year 1885. | Total. |
|------------|--------------------------------|-------------------------------------|--------|--|--------|
| West.....  | 1,319                          | 908                                 | 2,227  | 118  | 2,109  |
| South..... | 787                            | 175                                 | 962    | 64   | 898    |
| North..... | 571                            | 78                                  | 649    | 15   | 634    |
| Total..... | 2,677                          | 1,161                               | 3,838  | 197  | 3,641  |

The following statement shows the number of gas lamps in the city at the commencement and close of each year, from the organization of the Department of Public Works in 1876, to date:

| Year.     | WEST DIVISION.       |            |        | SOUTH DIVISION.      |            |        | NORTH DIVISION.      |            |        |
|-----------|----------------------|------------|--------|----------------------|------------|--------|----------------------|------------|--------|
|           | No. of Lamps Jan. 1. | No. added. | Total. | No. of Lamps Jan. 1. | No. added. | Total. | No. of Lamps Jan. 1. | No. added. | Total. |
| 1876..... | 5,160                | 202        | 5,362  | 2,965                | 92         | 3,057  | 2,095                | 39         | 2,134  |
| 1877..... | 5,362                | 97         | 5,439  | 3,057                | 47         | 3,104  | 2,134                | 34         | 2,168  |
| 1878..... | 5,439                | 42         | 5,481  | 3,104                | 17         | 3,121  | 2,168                | 15         | 2,183  |
| 1879..... | 5,481                | 38         | 5,519  | 3,121                | 1          | 3,122  | 2,183                | 58         | 2,241  |
| 1880..... | 5,519                | 137        | 5,656  | 3,122                | 31         | 3,153  | 2,241                | 30         | 2,271  |
| 1881..... | 5,656                | 196        | 5,852  | 3,153                | 18         | 3,171  | 2,271                | 50         | 2,321  |
| 1882..... | 5,852                | 289        | 6,141  | 3,171                | 27         | 3,198  | 2,321                | 9          | 2,330  |
| 1883..... | 6,141                | 415        | 6,554  | 3,198                | 255        | 3,453  | 2,330                | 54         | 2,384  |
| 1884..... | 6,554                | 1,004      | 7,558  | 3,453                | 133        | 3,586  | 2,384                | 165        | 2,549  |
| 1885..... | 7,558                | 594        | 8,152  | 3,586                | 223        | 3,809  | 2,549                | 59         | 2,608  |

Total number added during the past ten years:

|                    |       |
|--------------------|-------|
| West Division..... | 2,992 |
| South ".....       | 844   |
| North ".....       | 513   |

4,349

Number of gas lamps in city Jan. 1, 1876.... 10,220

Total number of gas lamps in city Decem-

ber 31, 1885..... 14,569

The following statement shows the number of oil lamps erected in the city each year from their introduction in 1880 to the present date:



| YEAR.     | WEST DIVISION.       |            |        | SOUTH DIVISION.      |            |        | NORTH DIVISION.      |            |        |
|-----------|----------------------|------------|--------|----------------------|------------|--------|----------------------|------------|--------|
|           | No. of Lamps Jan. 1. | No. added. | Total. | No. of Lamps Jan. 1. | No. added. | Total. | No. of Lamps Jan. 1. | No. added. | Total. |
| 1881..... | 257                  | .....      | 257    | 97                   | .....      | 97     | 220                  | .....      | 220    |
| 1882..... | 257                  | 675        | 932    | 97                   | 501        | 598    | 220                  | 315        | 535    |
| 1883..... | 932                  | 262        | 1194   | 598                  | .....      | 598    | 535                  | 36         | 571    |
| 1884..... | 1194                 | 125        | 1319   | 598                  | 189        | 787    | 571                  | .....      | 571    |
| 1885..... | 1319                 | 790        | 2109   | 787                  | 111        | 898    | 571                  | 63         | 634    |

Total number added during the past five years:

|                    |       |
|--------------------|-------|
| West Division..... | 1,852 |
| South " .....      | 801   |
| North " .....      | 414   |
|                    | 3,067 |

|  |     |
|--|-----|
| Total number of oil lamps in city January 1, 1881..... | 574 |
|--|-----|

|  |       |
|--|-------|
| Total number of oil lamps in city December 31, 1885..... | 3,641 |
|--|-------|

The oil lamps are lighted, cleaned, extinguished, glazed and kept in repair by the contractors.

The number of lamps glazed to replace broken glass was 23,842, of which 13,718 were in the West Division, and 10,124 in the North and South Divisions, the average being about 65 per day. In the work 181 boxes of door lights of glass, 191 boxes top lights, and 716 boxes of side lights were used—in all 1,088 boxes of 50 feet each.



The number of new lamps made for the Bureau of Special Assessments was 876. The glass used in these were 23 boxes door lights, 55 boxes top lights, and 71 boxes side lights.

The whole amount of glass used during the year was 204 boxes of door-lights, 246 boxes of top lights, and 787 boxes side lights—in all, 1,237 boxes.

The number of old lamps repaired and painted was 624. Of these 378 were for the West Division, and 246 for the North and South Divisions.

Two thousand two hundred and twenty-six new lamps were made to replace those worn out or destroyed; of these 773 were guide lamps, and 78 viaduct lamps. All lamps made at the City Lamp Shop are of the "Stewart patent," of which there are at the present date 12,862 in use in the city.

Respectfully submitted,

JOHN STEWART,

*Superintendent of Street Lamps.*

## SIDEWALKS.

The number of miles of sidewalks rebuilt during the year, including wood, stone and concrete, also miles of sidewalk repaired, is shown in the following table:

| DIVISION.   | MATERIAL. |        |          | TOTAL<br>MILES. | Sidew'ks<br>Repaired | GRAND<br>TOTAL<br>MILES. |
|-------------|-----------|--------|----------|-----------------|----------------------|--------------------------|
|             | Wood.     | Stone. | Concrete |                 |                      |                          |
| South.....  | 19.00     | 1.98   | .37      | 21.30           | 17.08                | 38.38                    |
| West.....   | 39.06     | 3.13   | .40      | 42.59           | 25.46                | 68.05                    |
| North.....  | 13.36     | 2.92   | .08      | 16.36           | 1.83                 | 17.69                    |
| Totals..... | 71.42     | 7.98   | .85      | 80.25           | 43.82                | 124.07                   |

In addition to the above there has been 34.70 miles of wooden sidewalks constructed on ground never before occupied by sidewalks, distributed in each division as follows:

|                     |            |
|---------------------|------------|
| South Division..... | 3.80 miles |
| West ".....         | 28.20 "    |
| North ".....        | 2.70 "     |

During the year the department constructed stone sidewalks on Twenty-second street from Indiana avenue to South Park avenue, for which a special assessment was levied, the work being done under contract.

The total number of miles of sidewalks under the control of the city and the West, South and Lincoln Park Commissioners at the close of the year is given in the following summary:

| UNDER CONTROL<br>OF     | MATERIAL.       |                  |                     | TOTAL<br>MILES. | INCREASE OVER THE<br>YEAR 1894. |                  |                     |                 |
|-------------------------|-----------------|------------------|---------------------|-----------------|---------------------------------|------------------|---------------------|-----------------|
|                         | Wood.<br>Miles. | Stone,<br>Miles. | Concr'te.<br>Miles. |                 | Wood.<br>Miles.                 | Stone,<br>Miles. | Concr'te.<br>Miles. | Total<br>Miles. |
| The City.....           | 746.60          | 65.54            | 12.04               | 824.18          | 25.87                           | 7.98             | .85                 | 34.70           |
| South Park Com'rs ..... |                 | 7.77             | .....               | 7.77            | .....                           | .....            | .....               | .....           |
| West Park Com'rs. ....  |                 | 6.06             | .....               | 6.06            | .....                           | .....            | .....               | .....           |
| Lincoln Park Com. ....  |                 | .75              | .....               | .75             | .....                           | .....            | .....               | .....           |
| Grand Total....         | 746.60          | 80.12            | 12.04               | 838.76          | 25.87                           | 7.98             | .85                 | 34.70           |

Respectfully submitted,

L. E. McGANN,

*Superintendent of Streets.*



## HORSE RAILWAYS.

During the year the different companies have laid pavement on the portion of the streets occupied by their tracks as follows :

| CORPORATION.            | Granite Block—<br>Square Yds. | Cobble Stone—<br>Square Yds. | Pine Block<br>Sqr. Yds. | Total<br>Square Yds. |
|-------------------------|-------------------------------|------------------------------|-------------------------|----------------------|
| Chicago City Ry. Co...  | 21,115                        | .....                        | .....                   | 21,115               |
| Chicago W. Div. Ry. Co. | .....                         | 32,425                       | 22,339                  | 54,764               |
| N. Chic. City Ry. Co... | .....                         | .....                        | 3,920                   | 3,920                |
| Totals.....             | 21,115                        | 32,425                       | 26,259                  | 79,799               |

Street railway extensions were made as follows:

## CHICAGO PASSENGER RAILWAY CO.

| ON                      | FROM               | TO                 | Lineal<br>Feet. | Remarks.      |
|-------------------------|--------------------|--------------------|-----------------|---------------|
| Adams street.....       | Clark street.....  | Desplaines street. | 2,650           | Double track. |
| Desplaines street. .... | Adams street.....  | Harrison street... | 1,775           | Double track. |
| Harrison street.....    | Desplaines street. | Western avenue...  | 11,440          | Double track. |
| Western avenue. ....    | Harrison street... | Flournoy street... | 325             | Double track. |
| Total .....             | .....              | .....              | 16,190          | 3.07 miles.   |

## CHICAGO WEST DIVISION RAILWAY CO.

| ON                    | FROM              | TO                | Lineal<br>Feet. | Remarks.      |
|-----------------------|-------------------|-------------------|-----------------|---------------|
| Noble street.....     | Milwaukee av....  | Blackhawk street  | 1,675           | Double track. |
| Blackhawk street..... | Noble street..... | Holt street.....  | 672             | Double track. |
| Holt street.....      | Blackhawk st....  | North avenue....  | 1,335           | Double track. |
| North avenue.....     | Holt street.....  | Ashland avenue... | 665             | Double track. |
| Ashland avenue.....   | North avenue...   | Clybourn place... | 2,020           | Double track. |
| Clybourn place.....   | Ashland avenue... | Wood street.....  | 1,300           | Double track. |
| Total.....            | .....             | .....             | 7,667           | 1.45 miles.   |



## RECAPITULATION.

Total miles of streets occupied by railway tracks,  
operated and controlled by the different railway  
companies at the close of the year :

|  |              |
|--|--------------|
| North Chicago City Railway Company.....    | 17.88        |
| Chicago City Railway Company.....          | 28.80        |
| Chicago West Division Railway Company..... | 40.50        |
| Chicago Passenger Railway Company.....     | 3.07         |
| Total mileage.....                         | <u>90.25</u> |

## SPECIAL ASSESSMENT DEPARTMENT.

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CHICAGO, December 31, 1885.

HON. DE WITT C. CREGIER,

*Commissioner of Public Works:*

DEAR SIR: I submit herewith in tabular form a statement of special assessments made in this department during the past year, with a summary of the estimated cost of the same, also the amount of special assessments made in each year during the past twenty-five years:

## STATEMENT OF ASSESSMENTS FOR WOODEN BLOCK PAVEMENT.

| Warrant No. | NAME OF STREET.        | FROM                 | TO                         | AMOUNT OF ASSESSMENT. |
|-------------|------------------------|----------------------|----------------------------|-----------------------|
| 5,614       | Augusta street         | Milwaukee avenue     | Elston avenue              | \$11,188 94           |
| 5,615       | West Congress street   | Hoyle avenue         | Leavitt street             | 4,243 05              |
| 5,616       | West Erie street       | Milwaukee avenue     | Curtis street              | 10,984 30             |
| 5,618       | Milwaukee avenue       | Union street         | West Division street       | 38,573 47             |
| 5,619       | Aberdeen street        | West Madison street  | West Harrison street       | 16,418 90             |
| 5,621       | West Fourteenth street | Stewart avenue       | Blue Island avenue         | 35,588 62             |
| 5,627       | Kingsbury street       | Kinzie street        | Erie street                | 26,486 80             |
| 5,628       | Thirty-seventh street  | State street         | Halsted street             | 50,278 77             |
| 5,629       | Paulina street         | West Harrison street | West Polk street           | 10,472 58             |
| 5,630       | Lafin street           | West Harrison street | West Taylor street         | 19,673 46             |
| 5,656       | West Erie street       | Ashland avenue       | Leavitt street             | 37,264 34             |
| 5,657       | Depuyser street        | Desplaines street    | Halsted street             | 4,807 26              |
| 5,658       | Thirty-first street    | Halsted street       | Pinney court               | 52,503 70             |
| 5,660       | Goethe street          | North Wells street   | Lake Shore drive           | 13,333 00             |
| 5,663       | Union street           | West Twelfth street  | Meagher street             | 20,259 32             |
| 5,664       | Blue Island avenue     | West Harrison street | Sixteenth street viaduct   | 38,394 16             |
| 5,666       | Augusta street         | Milwaukee avenue     | Wood street                | 28,784 56             |
| 5,667       | Liberty street         | Canal street         | Jefferson street           | 5,033 88              |
| 5,668       | Schiller street        | North Clark street   | North Wells street         | 4,575 00              |
| 5,671       | West Huron street      | Milwaukee avenue     | Ashland avenue             | 39,681 50             |
| 5,701       | Canalport avenue       | Canal street         | Halsted street             | 12,175 27             |
| 5,720       | Hoyle avenue           | West Harrison street | DeKalb street              | 7,737 14              |
| 5,733       | Newberry avenue        | Maxwell street       | West Fourteenth street     | 8,838 85              |
| 5,750       | West Adams street      | Hoyle avenue         | Oakley avenue              | 9,335 77              |
| 5,773       | Sedgwick street        | Lincoln avenue       | Belden avenue              | 15,010 52             |
| 5,787       | Twenty-second street   | State street         | Wentworth avenue           | 8,809 28              |
| 5,807       | Main street            | Thirty-first street  | South Branch Chicago river | 75,126 25             |
| 5,912       | Ann street             | West Randolph street | West Lake street           | 3,462 48              |
| 5,913       | Paulina street         | West Division street | Milwaukee avenue           | 6,337 55              |

|       |                             |                            |  |           |
|-------|-----------------------------|----------------------------|--|-----------|
| 5,914 | Ontario street.....         | North Clark street.....    | North Franklin street.....   | 7,452 56  |
| 5,915 | West Adams street.....      | Western avenue.....        | Rockwell street.....   | 14,416 75 |
| 5,919 | Morgan street.....          | West Randolph street.....  | West Lake street.....  | 2,578 48  |
| 5,921 | West Randolph street.....   | Halsted street.....        | Ogden avenue.....  | 25,763 00 |
| 5,922 | Morgan street.....          | West Lake street.....      | Fulton street.....   | 3,010 22  |
| 5,923 | Throop street.....          | West Madison street.....   | West Washington street.....  | 2,913 95  |
| 5,926 | Ashland avenue.....         | Milwaukee avenue.....      | West Clybourn place.....   | 53,959 16 |
| 5,927 | Garfield avenue.....        | North Clark street.....    | Sodgwick street.....   | 3,358 75  |
| 5,943 | Alley.....                  | Sixteenth street.....      | <small>The N. E. corner of N. E. Ave. &amp; 1st St. of S. W. 1st St. &amp; 2nd St.</small> | 1,442 93  |
| 5,944 | Johnson place.....          | Thirty-seventh street..... | Thirty-eighth street.....  | 3,395 71  |
| 5,945 | Green street.....           | West Madison street.....   | West Lake street.....  | 8,187 54  |
| 5,946 | Robey street.....           | West Lake street.....      | West Indiana street.....   | 18,692 46 |
| 5,947 | Portland avenue.....        | Twenty-sixth street.....   | Thirty-first street.....   | 28,861 38 |
| 5,948 | Aberdeen street.....        | West Harrison street.....  | Thirty-Polk street.....  | 7,301 71  |
| 5,949 | Bunker street.....          | Canal street.....          | C. B. & Q. Railroad tracks.....  | 1,765 72  |
| 5,952 | Milwaukee avenue.....       | West Division street.....  | North avenue.....  | 20,462 78 |
| 5,986 | Alley.....                  | May street.....            | <small>Ass street, in S. pt. blk 29, Carpenter's add.</small>                              | 570 52    |
| 5,987 | Austin avenue.....          | Desplaines street.....     | Polk street.....   | 40,925 70 |
| 5,988 | Dearborn street.....        | Jackson street.....        | Hanover street.....  | 31,612 48 |
| 5,989 | Twenty-third street.....    | Wentworth avenue.....      | Polk street.....   | 18,647 35 |
| 5,990 | Halsted street.....         | West Randolph street.....  | West Indiana street.....   | 8,793 30  |
| 5,991 | West Polk street.....       | Ogden avenue.....          | Western avenue.....  | 22,539 90 |
| 5,996 | Winchester avenue.....      | West Jackson street.....   | West Harrison street.....  | 11,668 38 |
| 5,997 | Front street.....           | Sangamon street.....       | Carpenter street.....  | 4,361 86  |
| 5,999 | Sangamon street.....        | West Chicago avenue.....   | C. & N. W. Railway.....  | 7,867 10  |
| 6,002 | Willow street.....          | Clybourn avenue.....       | Larnabee street.....   | 18,676 46 |
| 6,003 | Curtis street.....          | Fulton street.....         | West Huron street.....   | 24,116 57 |
| 6,004 | DeKalb street.....          | Flournoy street.....       | Leavitt street.....  | 14,492 30 |
| 6,006 | Campbell place.....         | Leavitt street.....        | Oakley avenue.....   | 7,149 74  |
| 6,007 | Ewing street.....           | Halsted street.....        | Blue Island avenue.....  | 5,825 40  |
| 6,010 | North Clark street.....     | Division street.....       | North avenue.....  | 18,541 13 |
| 6,012 | West Eighteenth street..... | Canal street.....          | Union street.....  | 10,853 86 |
| 6,013 | Halsted street.....         | Canalport avenue.....      | West Twenty-second street.....   | 2,938 10  |
| 6,014 | West Madison street.....    | Ashland avenue.....        | Western avenue.....  | 29,510 60 |
| 6,026 | West Monroe street.....     | Ashland avenue.....        | Robey street.....  | 16,423 57 |



## STATEMENT OF ASSESSMENTS FOR WOODEN BLOCK PAVEMENT.

| Warrant No. | NAME OF STREET.        | FROM                 | TO                         | AMOUNT OF ASSESSMENT. |
|-------------|------------------------|----------------------|----------------------------|-----------------------|
| 5,614       | Augusta street         | Milwaukee avenue     | Elston avenue              | \$11,188 94           |
| 5,615       | West Congress street   | Hoyle avenue         | Leavitt street             | 4,243 05              |
| 5,616       | West Erie street       | Milwaukee avenue     | Curtis street              | 10,984 80             |
| 5,618       | Milwaukee avenue       | Union street         | West Division street       | 38,578 47             |
| 5,619       | Aberdeen street        | West Madison street  | West Harrison street       | 16,418 90             |
| 5,621       | West Fourteenth street | Stewart avenue       | Blue Island avenue         | 35,538 02             |
| 5,627       | Kingsbury street       | Kinzie street        | Erie street                | 26,493 80             |
| 5,628       | Thirty-seventh street  | State street         | Halsted street             | 50,278 77             |
| 5,629       | Paulina street         | West Harrison street | West Polk street           | 10,473 58             |
| 5,630       | Lafayette street       | West Harrison street | West Taylor street         | 19,673 46             |
| 5,656       | West Erie street       | Ashland avenue       | Leavitt street             | 37,204 34             |
| 5,657       | Depuyster street       | Desplaines street    | Halsted street             | 4,807 26              |
| 5,658       | Thirty-first street    | Halsted street       | Pitney court               | 52,503 70             |
| 5,660       | Goethe street          | North Wells street   | Lake Shore drive           | 13,333 00             |
| 5,663       | Union street           | West Twelfth street  | Meagher street             | 20,259 32             |
| 5,664       | Blue Island avenue     | West Harrison street | Sixteenth street viaduct   | 38,394 16             |
| 5,666       | Augusta street         | Milwaukee avenue     | Wood street                | 28,734 56             |
| 5,667       | Liberty street         | Canal street         | Jefferson street           | 5,033 88              |
| 5,668       | Schiller street        | North Clark street   | North Wells street         | 4,575 00              |
| 5,671       | West Huron street      | Milwaukee avenue     | Ashland avenue             | 39,681 50             |
| 5,701       | Canalport avenue       | Canal street         | Halsted street             | 12,175 27             |
| 5,720       | Hoyle avenue           | West Harrison street | DeKalb street              | 7,737 14              |
| 5,733       | Newberry avenue        | Maxwell street       | West Fourteenth street     | 8,838 35              |
| 5,750       | West Adams street      | Hoyle avenue         | Oakley avenue              | 9,335 77              |
| 5,773       | Sedgwick street        | Lincoln avenue       | Belden avenue              | 15,010 53             |
| 5,787       | Twenty-second street   | State street         | Wentworth avenue           | 8,899 38              |
| 5,807       | Main street            | Thirty-first street  | South Branch Chicago river | 75,136 35             |
| 5,912       | Ann street             | West Randolph street | West Lake street           | 8,462 48              |
| 5,913       | Paulina street         | West Division street | Milwaukee avenue           | 6,337 55              |

|            |                            |                            |  |                |
|------------|----------------------------|----------------------------|--|----------------|
| 6,182      | Paulina street.....        | West Harrison street.....  | West Polk street.....                          | 10,472 58      |
| 6,254      | Will street.....           | Milwaukee avenue.....      | Augusta street.....                            | 5,327 51       |
| 6,306      | Chestnut street.....       | North Clark street.....    | North Wells street.....                        | 5,146 05       |
| 6,308      | Thirty-fourth street.....  | Halsted street.....        | Auburn street.....                             | 6,690 67       |
| 6,309      | Cornelia street.....       | Milwaukee avenue.....      | Ashland avenue.....                            | 18,591 68      |
| 6,310      | Bunker street.....         | Canal street.....          | Halsted street.....                            | 12,187 00      |
| 6,315      | North Franklin street..... | Chicago avenue.....        | Division street.....                           | 18,580 73      |
| 6,317      | Paulina street.....        | West Lake street.....      | West Indiana street.....                       | 18,051 40      |
| 6,319      | Sedgwick street.....       | Division street.....       | North avenue.....                              | 10,705 70      |
| 6,320      | Paulina street.....        | West Indiana street.....   | West Chicago avenue.....                       | 16,371 12      |
| 6,321      | Elm street.....            | Crosby street.....         | North Wells street.....                        | 27,928 13      |
| 6,322      | Wesson street.....         | Oak street.....            | Division street.....                           | 7,680 15       |
| 6,323      | Townsend street.....       | Chicago avenue.....        | Division street.....                           | 18,080 75      |
| 6,324      | Larrabee street.....       | Webster avenue.....        | Fullerton avenue.....                          | 11,119 86      |
| 6,326      | Alley.....                 | North State street.....    | Cass st., bet. Michigan and Illinois sts.      | 1,049 80       |
| 6,327      | Archer avenue.....         | Halsted street.....        | South Branch Chicago river.....                | 34,721 70      |
| 6,328      | Hobbie street.....         | Hawthorn avenue.....       | Sedgwick street.....                           | 18,746 20      |
| 6,329      | Alley.....                 | Wood street.....           | Lincoln st., bet. Park ave. and W. Lake st.    | 2,162 40       |
| 6,334      | Alley.....                 | North Clark street.....    | La Salle ave., bet. Michigan and Illinois sts. | 1,068 96       |
| 6,335      | Alley.....                 | Block 2.....               | Magie & Highs' add.....                        | 1,998 23       |
| 6,337      | Kingsbury street.....      | Erie street.....           | Chicago avenue.....                            | 7,717 39       |
| 6,338      | Chicago avenue.....        | North Clark street.....    | North Branch Chicago river.....                | 19,893 27      |
| 6,339      | Morgan street.....         | West Harrison street.....  | West Twelfth street.....                       | 17,081 72      |
| 6,340      | Paulina street.....        | West Madison street.....   | West Lake street.....                          | 9,670 36       |
| 6,392      | Rees street.....           | Larrabee street.....       | Halsted street.....                            | 18,107 61      |
| 6,396      | Clinton street.....        | West Van Buren street..... | West Harrison street.....                      | 4,611 81       |
| 6,397      | Jefferson street.....      | West Van Buren street..... | West Harrison street.....                      | 5,756 88       |
| 6,398      | Lafin street.....          | West Taylor street.....    | West Twelfth street.....                       | 9,274 30       |
| 6,399      | Astor street.....          | Scott street.....          | Schiller street.....                           | 5,637 73       |
| 6,400      | Goethe street.....         | North Wells street.....    | Sedgwick street.....                           | 6,720 16       |
| 6,401      | Idaho street.....          | West Van Buren street..... | West Harrison street.....                      | 4,029 87       |
| Total..... |                            |                            |  | \$1,986,975 78 |



## STATEMENT OF ASSESSMENTS FOR WOODEN BLOCK PAVEMENT.

| Warrant No. | NAME OF STREET.               | FROM                                | TO   | AMOUNT OF ASSESSMENT. |
|-------------|-------------------------------|-------------------------------------|--|-----------------------|
| 6,027       | Alley.....                    | West Washington street.....         | West Randolph, bet. Jefferson and Desplaines st. | \$1,407 72            |
| 6,039       | West Twenty-first street..... | Blue Island avenue.....             | Western avenue.....                              | 72,438 08             |
| 6,042       | May street.....               | Milwaukee avenue.....               | George street.....                               | 11,098 04             |
| 6,043       | Stanton avenue.....           | Douglas avenue.....                 | Egan avenue.....                                 | 14,687 30             |
| 6,044       | Flournoy street.....          | Ogden avenue.....                   | Leavitt street.....                              | 16,477 94             |
| 6,046       | Campbell avenue.....          | West Madison street.....            | West Polk street.....                            | 41,564 02             |
| 6,047       | Pearson street.....           | W. ter. bl'k 1, Bushnell's add..... | East terminus.....                               | 9,905 36              |
| 6,059       | Ada street.....               | West Randolph street.....           | Carroll avenue.....                              | 9,839 81              |
| 6,060       | Ogden avenue.....             | West Madison street.....            | West Randolph street.....                        | 11,937 38             |
| 6,080       | Front street.....             | Elston avenue.....                  | Carpenter street.....                            | 10,211 24             |
| 6,082       | St. Johns place.....          | Carroll avenue.....                 | Arbor place.....                                 | 2,035 26              |
| 6,083       | Garfield avenue.....          | Sedgwick street.....                | Halsted street.....                              | 18,148 64             |
| 6,101       | Oak street.....               | North Wells street.....             | North Franklin street.....                       | 2,696 54              |
| 6,102       | Paulina street.....           | Milwaukee avenue.....               | North avenue.....                                | 19,989 68             |
| 6,103       | Paulina street.....           | West Jackson street.....            | West Harrison street.....                        | 9,248 21              |
| 6,104       | Hermilage avenue.....         | West Jackson street.....            | West Polk street.....                            | 20,247 47             |
| 6,105       | North Center avenue.....      | Milwaukee avenue.....               | Augusta street.....                              | 6,797 40              |
| 6,106       | Cornell street.....           | Milwaukee avenue.....               | Ashland avenue.....                              | 16,551 15             |
| 6,107       | Wood street.....              | West Chicago avenue.....            | West Division street.....                        | 23,252 80             |
| 6,110       | Twenty-fifth street.....      | State street.....                   | Wabash avenue.....                               | 2,404 58              |
| 6,111       | Wood street.....              | West Indiana street.....            | West Chicago avenue.....                         | 17,278 71             |
| 6,114       | North avenue.....             | Milwaukee avenue.....               | Western avenue.....                              | 11,632 55             |
| 6,116       | West Chicago avenue.....      | Milwaukee avenue.....               | Ashland avenue.....                              | 18,393 40             |
| 6,117       | Pitney court.....             | Archer avenue.....                  | Thirty-first street.....                         | 6,906 23              |
| 6,125       | Elm street.....               | North Wells street.....             | La Salle avenue.....                             | 3,639 17              |
| 6,173       | Paulina street.....           | West Chicago avenue.....            | West Division street.....                        | 23,653 46             |
| 6,174       | South Dearborn street.....    | Twenty-second street.....           | Twenty-sixth street.....                         | 18,119 25             |
| 6,178       | Twenty fourth street.....     | State street.....                   | Hanover street.....                              | 40,633 50             |
| 6,181       | Wood street.....              | Milwaukee avenue.....               | North avenue.....                                | 12,502 24             |

|            |                            |                            |  |                |
|------------|----------------------------|----------------------------|--|----------------|
| 6,182      | Paulina street.....        | West Harrison street.....  | West Polk street.....                              | 10,472 58      |
| 6,254      | Will street.....           | Milwaukee avenue.....      | Augusta street.....                                | 5,327 51       |
| 6,306      | Chestnut street.....       | North Clark street.....    | North Wells street.....                            | 5,146 05       |
| 6,308      | Thirty-fourth street.....  | Halsted street.....        | Auburn street.....                                 | 6,690 67       |
| 6,309      | Cornelia street.....       | Milwaukee avenue.....      | Ashland avenue.....                                | 18,391 68      |
| 6,310      | Bunker street.....         | Canal street.....          | Halsted street.....                                | 12,137 00      |
| 6,315      | North Franklin street..... | Chicago avenue.....        | Division street.....                               | 18,580 73      |
| 6,317      | Paulina street.....        | West Lake street.....      | West Indiana street.....                           | 18,051 40      |
| 6,319      | Sedgwick street.....       | Division street.....       | North avenue.....                                  | 10,705 70      |
| 6,320      | Paulina street.....        | West Indiana street.....   | West Chicago avenue.....                           | 16,271 12      |
| 6,321      | Elm street.....            | Crosby street.....         | North Wells street.....                            | 27,938 13      |
| 6,322      | Wesson street.....         | Oak street.....            | Division street.....                               | 7,080 15       |
| 6,323      | Townsend street.....       | Chicago avenue.....        | Division street.....                               | 18,080 75      |
| 6,324      | Larrabee street.....       | Webster avenue.....        | Fullerton avenue.....                              | 11,119 86      |
| 6,326      | Alley.....                 | North State street.....    | Cass st., bet. Michigan and Illinois sts.....      | 1,049 80       |
| 6,327      | Archer avenue.....         | Halsted street.....        | South Branch Chicago river.....                    | 34,721 70      |
| 6,328      | Hobbie street.....         | Hawthorn avenue.....       | Sedgwick street.....                               | 18,746 20      |
| 6,329      | Alley.....                 | Wood street.....           | Lincoln st., bet. Park ave. and W. Lake st.....    | 2,162 40       |
| 6,334      | Alley.....                 | North Clark street.....    | La Salle ave., bet. Michigan and Illinois sts..... | 1,068 96       |
| 6,335      | Alley.....                 | Block 2.....               | Magie & Highs' add.....                            | 1,998 23       |
| 6,337      | Kingsbury street.....      | Erie street.....           | Chicago avenue.....                                | 7,717 39       |
| 6,338      | Chicago avenue.....        | North Clark street.....    | North Branch Chicago river.....                    | 19,898 27      |
| 6,339      | Morgan street.....         | West Harrison street.....  | West Twelfth street.....                           | 17,081 73      |
| 6,340      | Paulina street.....        | West Madison street.....   | West Lake street.....                              | 9,670 86       |
| 6,392      | Rees street.....           | Larrabee street.....       | Halsted street.....                                | 18,107 61      |
| 6,396      | Clinton street.....        | West Van Buren street..... | West Harrison street.....                          | 4,611 81       |
| 6,397      | Jefferson street.....      | West Van Buren street..... | West Harrison street.....                          | 5,756 88       |
| 6,398      | Lafin street.....          | West Taylor street.....    | West Twelfth street.....                           | 9,274 30       |
| 6,399      | Astor street.....          | Scott street.....          | Schiller street.....                               | 5,627 73       |
| 6,400      | Goethe street.....         | North Wells street.....    | Sedgwick street.....                               | 6,720 16       |
| 6,401      | Idaho street.....          | West Van Buren street..... | West Harrison street.....                          | 4,039 87       |
| Total..... |                            |                            |  | \$1,936,975 78 |



## STATEMENT OF ASSESSMENTS FOR LAYING PRIVATE DRAINS.

| Warrant No. | NAME OF STREET.             | FROM                          | TO                            | AMOUNT OF ASSESSMENT. |
|-------------|-----------------------------|-------------------------------|-------------------------------|-----------------------|
| 5,631       | Liberty street.....         | Canal street.....             | Jefferson street.....         | \$405 00              |
| 5,632       | Halsted street.....         | North Branch Chicago river... | Division street.....          | 760 00                |
| 5,633       | Union street.....           | West Twelfth street.....      | Meagher street.....           | 1,313 50              |
| 5,634       | Thirty-seventh street.....  | State street.....             | Halsted street.....           | 4,309 50              |
| 5,635       | Wendell street.....         | North Wells street.....       | Sedgwick street.....          | 517 50                |
| 5,661       | Thirty-first street.....    | Halsted street.....           | Pitney court.....             | 2,893 35              |
| 5,721       | Augusta street.....         | Milwaukee avenue.....         | Elston avenue.....            | 176 00                |
| 5,722       | Will street.....            | Milwaukee avenue.....         | Augusta street.....           | 175 00                |
| 5,723       | North Centre avenue.....    | Milwaukee avenue.....         | Augusta street.....           | 160 00                |
| 5,724       | Paulina street.....         | Milwaukee avenue.....         | Wabansia avenue.....          | 280 50                |
| 5,725       | Cornell street.....         | Milwaukee avenue.....         | Ashland avenue.....           | 100 00                |
| 5,726       | Front street.....           | Sangamon street.....          | Elston avenue.....            | 314 50                |
| 5,727       | Paulina street.....         | West Madison street.....      | West Jackson street.....      | 289 00                |
| 5,729       | Mather street.....          | Desplaines street.....        | Halsted street.....           | 594 00                |
| 5,749       | Sangamon street.....        | West Chicago avenue.....      | C. & N. W. Railway.....       | 190 00                |
| 5,751       | Lincoln street.....         | West Congress street.....     | Polk street.....              | 427 00                |
| 5,752       | DeKalb street.....          | Flournoy street.....          | Leavitt street.....           | 480 00                |
| 5,772       | West Adams street.....      | Hoyne avenue.....             | Oakley avenue.....            | 247 00                |
| 5,774       | Hermitage avenue.....       | West Jackson street.....      | West Polk street.....         | 848 00                |
| 5,775       | Hoyne avenue.....           | West Harrison street.....     | DeKalb street.....            | 160 50                |
| 5,776       | Lafin street.....           | West Harrison street.....     | West Taylor street.....       | 850 00                |
| 5,777       | Lytle street.....           | West Taylor street.....       | West Twelfth street.....      | 384 00                |
| 5,778       | Aberdeen street.....        | West Madison street.....      | West Harrison street.....     | 315 00                |
| 5,784       | Main street.....            | Thirty-first street.....      | South Branch Chicago river... | 2,786 75              |
| 5,789       | Cornelia street.....        | Milwaukee avenue.....         | Ashland avenue.....           | 297 00                |
| 5,836       | Honore street.....          | West Adams street.....        | West Harrison street.....     | 416 00                |
| 5,865       | Curtis street.....          | Fulton street.....            | West Huron street.....        | 918 00                |
| 5,866       | West Thirteenth street..... | Blue Island avenue.....       | Ashland avenue.....           | 1,056 00              |

|       |                            |  |                                 |          |
|-------|----------------------------|--|---------------------------------|----------|
| 5,867 | West Congress street.....  | Halsted street.....                              | Centre avenue.....              | 680 00   |
| 5,868 | West Monroe street.....    | Western avenue.....                              | Rockwell street.....            | 443 00   |
| 5,869 | Idaho street.....          | West Van Buren street.....                       | West Harrison street.....       | 416 00   |
| 5,870 | Green street.....          | West Madison street.....                         | West Lake street.....           | 341 00   |
| 5,879 | Paulina street.....        | West Chicago avenue.....                         | West Division street.....       | 1,120 00 |
| 5,880 | Paulina street.....        | West Division street.....                        | Milwaukee avenue.....           | 266 00   |
| 5,881 | Campbell avenue.....       | West Madison street.....                         | West Polk street.....           | 1,072 00 |
| 5,882 | Wood street.....           | West Indiana street.....                         | West Chicago avenue.....        | 410 00   |
| 5,884 | Paulina street.....        | West Harrison street.....                        | West Polk street.....           | 876 00   |
| 5,885 | Morgan street.....         | West Randolph street.....                        | Fulton street.....              | 328 00   |
| 5,886 | Paulina street.....        | West Indiana street.....                         | West Chicago avenue.....        | 500 00   |
| 5,887 | West Adams street.....     | Western avenue.....                              | Rockwell street.....            | 512 00   |
| 5,888 | Wood street.....           | West Chicago avenue.....                         | West Division street.....       | 2,014 50 |
| 5,893 | Paulina street.....        | West Madison street.....                         | West Indiana street.....        | 882 00   |
| 5,904 | West Randolph street.....  | Halsted street.....                              | Ogden avenue.....               | 713 00   |
| 5,905 | Clybourn place.....        | Clybourn avenue.....                             | North Branch Chicago river..... | 294 00   |
| 5,906 | Robey street.....          | West Lake street.....                            | West Indiana street.....        | 357 00   |
| 5,932 | Mohawk street.....         | North avenue.....                                | Garfield avenue.....            | 1,386 00 |
| 5,933 | Larrabee street.....       | Webster avenue.....                              | Fullerton avenue.....           | 792 00   |
| 5,934 | Belden avenue.....         | North Park avenue.....                           | Halsted street.....             | 1,334 00 |
| 5,935 | Sedgwick street.....       | Lincoln avenue.....                              | Belden avenue.....              | 768 00   |
| 5,936 | Garfield avenue.....       | North Clark street.....                          | Halsted street.....             | 968 00   |
| 5,937 | Willow street.....         | Clybourn avenue.....                             | Larrabee street.....            | 798 00   |
| 5,938 | Idaho street.....          | West Van Buren street.....                       | West Harrison street.....       | 644 40   |
| 5,953 | Campbell place.....        | Leavitt street.....                              | Oakley avenue.....              | 318 50   |
| 5,954 | Brown street.....          | Maxwell street.....                              | West Fourteenth street.....     | 209 00   |
| 5,955 | Centre street.....         | Sedgwick street.....                             | Halsted street.....             | 864 00   |
| 5,956 | Menomonee street.....      | Sedgwick street.....                             | Larrabee street.....            | 384 00   |
| 5,957 | Southport avenue.....      | Clybourn place.....                              | Fullerton avenue.....           | 1,313 50 |
| 5,958 | Beethoven place.....       | North Wells street.....                          | Sedgwick street.....            | 154 00   |
| 5,959 | Pearson street.....        | Easthall's add. to 0th go, its W. cor. in blk 1. | Its eastern terminus.....       | 594 00   |
| 5,960 | North Franklin street..... | Chicago avenue.....                              | Division street.....            | 900 00   |
| 5,961 | Thirty-fourth street.....  | State street.....                                | Indiana avenue.....             | 338 00   |
| 5,962 | Twenty-sixth street.....   | State street.....                                | Wentworth avenue.....           | 532 00   |



## STATEMENT OF ASSESSMENTS FOR LAYING PRIVATE DRAINS.—CONTINUED.

| Warrant No. | NAME OF STREET.               | FROM                       | TO                         | AMOUNT OF ASSESSMENT. |
|-------------|-------------------------------|----------------------------|----------------------------|-----------------------|
| 5,963       | Dearborn street.....          | Jackson street.....        | Polk street.....           | \$3,932 50            |
| 5,975       | Douglas avenue.....           | Michigan avenue.....       | L. S. & M. S. Railway..... | 375 00                |
| 5,976       | Thirty-third street.....      | L. S. & M. S. Railway..... | South Park avenue.....     | 704 00                |
| 5,978       | Sixteenth street.....         | State street.....          | Prairie avenue.....        | 450 00                |
| 5,979       | Portland avenue.....          | Twenty-sixth street.....   | Thirty-first street.....   | 882 00                |
| 5,980       | South Dearborn street.....    | Twenty-seventh street..... | Thirty-third street.....   | 378 00                |
| 5,981       | Sebor street.....             | Desplaines street.....     | Halsted street.....        | 985 00                |
| 5,982       | Aberdeen street.....          | West Harrison street.....  | West Polk street.....      | 140 00                |
| 5,993       | Forquer street.....           | Canal street.....          | C. B. & Q. Railroad.....   | 238 00                |
| 5,994       | Winchester avenue.....        | West Jackson street.....   | West Harrison street.....  | 429 00                |
| 6,008       | Ewing street.....             | Halsted street.....        | Blue Island avenue.....    | 140 00                |
| 6,009       | Carroll avenue.....           | Ashland avenue.....        | Leavitt street.....        | 2,846 50              |
| 6,015       | Twenty-third street.....      | Westworth avenue.....      | Hanover street.....        | 1,065 00              |
| 6,041       | West Twenty-first street..... | Blue Island avenue.....    | Western avenue.....        | 2,808 50              |
| 6,081       | Hudson avenue.....            | North avenue.....          | Centre street.....         | 704 00                |
| 6,092       | Vernon avenue.....            | Douglas avenue.....        | Thirty-seventh street..... | 1,481 00              |
| 6,093       | Ann street.....               | West Randolph street.....  | West Lake street.....      | 210 00                |
| 6,094       | Thirtieth street.....         | Prairie avenue.....        | Michigan avenue.....       | 253 00                |
| 6,108       | North avenue.....             | Milwaukee avenue.....      | Western avenue.....        | 2,146 00              |
| 6,109       | Tell place.....               | Milwaukee avenue.....      | Ashland avenue.....        | 255 00                |
| 6,118       | Oak street.....               | North Wells street.....    | Larrabee street.....       | 315 00                |
| 6,122       | Stanton avenue.....           | Douglas avenue.....        | Egan avenue.....           | 3,003 00              |
| 6,124       | Michigan avenue.....          | Douglas avenue.....        | Egan avenue.....           | 6,711 00              |
| 6,177       | Indiana avenue.....           | Thirtieth street.....      | Egan avenue.....           | 3,125 50              |
| 6,247       | Ogden avenue.....             | West Madison street.....   | West Randolph street.....  | 577 00                |
| 6,252       | Dix street.....               | West Chicago avenue.....   | Front street.....          | 165 33                |
| 6,262       | Pitney court.....             | Archer avenue.....         | Thirty-first street.....   | 576 00                |
| 6,263       | St. Clair street.....         | Michigan street.....       | Superior street.....       | 616 00                |

|       |                      |                       |                         |             |
|-------|----------------------|-----------------------|-------------------------|-------------|
| 6,307 | Wood street.....     | Milwaukee avenue..... | North avenue.....       | 540 00      |
| 6,305 | Lincoln place.....   | Garfield avenue.....  | Webster avenue.....     | 535 00      |
| 6,300 | Hobbie street.....   | Hawthorn avenue.....  | Sedgwick street.....    | 353 00      |
| 6,331 | Elm street.....      | Hawthorn avenue.....  | North Wells street..... | 966 00      |
| 6,333 | Willson street.....  | Oak street.....       | Division street.....    | 864 00      |
| 6,333 | Townsend street..... | Chicago avenue.....   | Division street.....    | 1,500 00    |
|       |                      |                       |                         | \$35,561 38 |



## STATEMENT OF ASSESSMENTS FOR MISCELLANEOUS STREET AND ALLEY IMPROVEMENTS.

| Warrant No. | IMPROVEMENT.           | NAME OF STREET.           | FROM                                | TO   | AMOUNT OF ASSESSMENT. |
|-------------|------------------------|---------------------------|-------------------------------------|--|-----------------------|
| 5,590       | Grading and plankings. | Alley.....                | West Harrison street.               | Garley st., bet. Morgan and Miller sts.....      | \$908 95              |
| 5,620       | Grading and plankings. | Calhoun place.....        | Dearborn street.....                | Clark street.....                                | 2,878 34              |
| 5,622       | Curbing and filling.   | Lytle street.....         | West Taylor street.....             | West Twelfth street.....                         | 3,402 35              |
| 5,623       | Curbing and filling.   | Wendell street.....       | North Wells street.....             | Sedgwick street.....                             | 10,892 42             |
| 5,626       | Granite.....           | Alley.....                | Madison street.....                 | Washington st., bet. Wabash and Mich. avs.       | 4,419 90              |
| 5,665       | Grading and plankings. | Chestnut street.....      | Twenty-seventh st.....              | 29th st., bet. Westworth av. and La Salle st     | 2,356 55              |
| 5,669       | Curbing and filling.   | Alley.....                | La Salle avenue.....                | Its western terminus.....                        | 10,635 17             |
| 5,672       | Grading and plankings. | Chestnut street.....      | Dearborn street.....                | N. State st., bet. Illinois and Indiana sts..... | 1,009 81              |
| 5,730       | Curbing and filling.   | Sebor street.....         | Desplaines street.....              | Halsted street.....                              | 2,178 47              |
| 5,731       | Curbing and filling.   | Lincoln street.....       | West Congress street.               | West Polk street.....                            | 5,768 42              |
| 5,838       | Curbing and filling.   | West Thirteenth st.....   | Blue Island avenue.....             | Ashland avenue.....                              | 31,564 82             |
| 5,909       | Granite.....           | Alley.....                | Jackson street.....                 | Van Buren st., bet. Wabash and Mich. avs.....    | 3,058 45              |
| 5,910       | Granite.....           | Sixteenth street.....     | State street.....                   | Eastern terminus.....                            | 22,965 37             |
| 5,911       | Granite.....           | Monroe street.....        | State street.....                   | Clark street.....                                | 16,396 77             |
| 5,916       | Macadam.....           | Thirty-fourth street..... | State street.....                   | Indiana avenue.....                              | 10,174 75             |
| 5,917       | Macadam.....           | Douglas avenue.....       | Michigan avenue.....                | L. S. & M. S. Railway.....                       | 14,170 60             |
| 5,918       | Macadam.....           | Thirty-third street.....  | State street.....                   | L. S. & M. S. Railway.....                       | 7,131 27              |
| 5,920       | Granite.....           | Dearborn street.....      | Madison street.....                 | Randolph street.....                             | 23,806 86             |
| 5,924       | Curbing and filling.   | Idaho street.....         | West Van Buren st.....              | West Harrison street.....                        | 2,694 14              |
| 5,925       | Granite.....           | Wabash avenue.....        | Jackson street.....                 | West Harrison street.....                        | 34,914 94             |
| 5,950       | Curbing and filling.   | Brown street.....         | Maxwell street.....                 | West Fourteenth street.....                      | 3,703 80              |
| 5,951       | Grading and plankings. | Alley.....                | Wood street.....                    | Lincoln st., bet. Lake and Walnut sts.....       | 1,272 00              |
| 5,992       | Curbing and filling.   | Sigel street.....         | North Wells street.....             | Sedgwick street.....                             | 1,964 48              |
| 5,998       | Granite.....           | Alley.....                | In N. W. $\frac{1}{4}$ bl'k 90..... | School Sec. Add. to Chicago.....                 | 1,100 36              |
| 6,005       | Curbing and filling.   | Southport avenue.....     | Clybourn place.....                 | Fullerton avenue.....                            | 7,850 20              |
| 6,011       | Macadam.....           | Vernon avenue.....        | Douglas avenue.....                 | Thirty-seventh street.....                       | 11,672 21             |
| 6,045       | Macadam.....           | Thirty-third street.....  | State street.....                   | South Park avenue.....                           | 21,625 14             |
| 6,112       | Macadam.....           | South Dearborn st.....    | Thirty-third street.....            | Egan avenue.....                                 | 27,729 80             |
| 6,113       | Macadam.....           | Tell place.....           | Milwaukee avenue.....               | Ashland avenue.....                              | 10,262 11             |
| 6,119       | Macadam.....           | Schiller street.....      | North State street.....             | Lake Shore drive.....                            | 4,358 80              |

|       |                           |                       |                       |   |              |
|-------|---------------------------|-----------------------|-----------------------|---|--------------|
| 6,165 | Filling.....              | West Congress street. | Campbell avenue.....  | Rockwell street.....                                | 369 93       |
| 6,166 | Filling.....              | Hermitage avenue...   | West Polk street....  | West Twelfth street.....                            | 1,971 55     |
| 6,167 | Filling.....              | Kendall street.....   | West Polk street....  | West Taylor street.....                             | 788 45       |
| 6,168 | Filling.....              | Cicero court.....     | West Van Buren st..   | West Harrison street.....                           | 545 90       |
| 6,169 | Asphalt blocks.....       | Alley.....            | Twentieth street....  | 21st st., bet. Pariss and Calumet aves.....         | 3,046 05     |
| 6,180 | Granite.....              | Alley.....            | Thirtieth street....  | 14th st., bet. State st. and Wabash ave.....        | 5,711 88     |
| 6,251 | Macadam.....              | Rhodes avenue.....    | Thirty-first street.. | North line lot 1, Am's Division.....                | 1,949 90     |
| 6,253 | Sheet asphalt.....        | Walton place.....     | Dearborn avenue....   | State street.....                                   | 4,293 53     |
| 6,257 | Sheet asphalt.....        | Warren avenue.....    | Ogden avenue.....     | Leavitt street.....                                 | 33,303 17    |
| 6,258 | Granite.....              | Clark street.....     | Jackson street.....   | Polk street.....                                    | 37,756 95    |
| 6,260 | Granite.....              | Fifth avenue.....     | Madison street.....   | Randolph street.....                                | 15,731 39    |
| 6,295 | Curbing and filling.....  | St. Clair street..... | Indiana street.....   | Superior street.....                                | 2,521 43     |
| 6,298 | Macadam.....              | Thirty-seventh st.... | Cottage Grove ave..   | Vincennes avenue.....                               | 5,842 07     |
| 6,307 | Macadam.....              | Twentieth street....  | Wabash avenue....     | Calumet avenue.....                                 | 6,235 31     |
| 6,311 | Grading and planking..... | Alley.....            | Twenty-ninth street.. | 31st st., bet. 8. Dearborn and Batterfield sts..... | 3,018 15     |
| 6,312 | Curbing and filling.....  | Pearson street.....   | North Wells street..  | Western terminus.....                               | 7,567 49     |
| 6,316 | Curbing and filling.....  | Mather street.....    | Desplaines street...  | Halsted street.....                                 | 3,016 26     |
| 6,402 | Curbing.....              | West Congress street  | Halsted street.....   | Centre avenue.....                                  | 4,191 63     |
|       |                           |                       |                       |   | \$439,702 28 |



## STATEMENT OF ASSESSMENTS FOR LAYING WATER-SERVICE PIPES.

| Warrant No. | NAME OF STREET.             | FROM  | TO                            | AMOUNT OF ASSESSMENT. |
|-------------|-----------------------------|---|-------------------------------|-----------------------|
| 5,636       | Thirty-first street.....    | Halsted street.....                               | Pitney court.....             | \$3,567 00            |
| 5,637       | Thirty-seventh street.....  | State street.....                                 | Halsted street.....           | 2,672 25              |
| 5,638       | Clark street.....           | Jackson street.....                               | Polk street.....              | 515 30                |
| 5,639       | Canalport avenue.....       | Canal street.....                                 | Halsted street.....           | 232 00                |
| 5,640       | West Monroe street.....     | Western avenue.....                               | Rockwell street.....          | 593 50                |
| 5,641       | Sixteenth street.....       | State street.....                                 | Prairie avenue.....           | 538 20                |
| 5,642       | Pearson street.....         | North Wells street.....                           | Its western terminus.....     | 238 50                |
| 5,643       | Beethoven place.....        | North Wells street.....                           | Sedgwick street.....          | 111 00                |
| 5,644       | Portland avenue.....        | Twenty-sixth street.....                          | Thirty-first street.....      | 1,004 00              |
| 5,645       | Front street.....           | Carpenter street.....                             | Elston avenue.....            | 365 50                |
| 5,646       | Will street.....            | Milwaukee avenue.....                             | Augusta street.....           | 231 50                |
| 5,647       | Augusta street.....         | Milwaukee avenue.....                             | Elston avenue.....            | 214 50                |
| 5,648       | Lincoln street.....         | West Congress street.....                         | West Polk street.....         | 483 50                |
| 5,649       | May street.....             | Milwaukee avenue.....                             | George street.....            | 511 00                |
| 5,650       | Dearborn street.....        | Madison street.....                               | Randolph street.....          | 390 10                |
| 5,651       | Blue Island avenue.....     | West Harrison street.....                         | Sixteenth street viaduct..... | 3,144 75              |
| 5,662       | Wendell street.....         | Sedgwick street.....                              | North Wells street.....       | 296 50                |
| 5,702       | West Congress street.....   | Halsted street.....                               | Center avenue.....            | 1,063 50              |
| 5,703       | Sangamon street.....        | West Chicago avenue.....                          | C. & N. W. tracks.....        | 187 20                |
| 5,704       | Hermitage avenue.....       | West Harrison street.....                         | West Polk street.....         | 880 00                |
| 5,705       | Curtis street.....          | Fulton street.....                                | West Huron street.....        | 1,391 00              |
| 5,706       | West Thirteenth street..... | Blue Island avenue.....                           | Ashland avenue.....           | 2,284 50              |
| 5,707       | Willow street.....          | Clybourn avenue.....                              | Larrabee street.....          | 964 50                |
| 5,708       | Pearson street.....         | Bushnell's add. to Chicago, its W. br., in b'k 1. | Its eastern terminus.....     | 595 50                |
| 5,709       | Sebor street.....           | Desplaines street.....                            | Halsted street.....           | 1,052 65              |
| 5,728       | North Franklin street.....  | Chicago avenue.....                               | Division street.....          | 379 60                |
| 5,734       | Paulina street.....         | West Madison street.....                          | West Jackson street.....      | 332 50                |
| 5,735       | Lytle street.....           | West Taylor street.....                           | West Twelfth street.....      | 135 50                |
| 5,736       | Lafin street.....           | West Harrison street.....                         | West Taylor street.....       | 1,136 00              |
| 5,737       | Aberdeen street.....        | West Madison street.....                          | West Harrison street.....     | 307 50                |

|       |                            |                            |                                 |          |
|-------|----------------------------|----------------------------|---------------------------------|----------|
| 5,753 | Mather street.....         | Desplaines street.....     | Halsted street.....             | 635 50   |
| 5,783 | Main street.....           | Thirty-first street.....   | South branch Chicago river..... | 3,369 50 |
| 5,785 | Cornelia street.....       | Milwaukee avenue.....      | Ashland avenue.....             | 635 00   |
| 5,788 | Wabash avenue.....         | Jackson street.....        | Harrison street.....            | 306 40   |
| 5,837 | Belden avenue.....         | North Park avenue.....     | Halsted street.....             | 1,907 35 |
| 5,842 | Green street.....          | West Madison street.....   | West Lake street.....           | 273 00   |
| 5,843 | Ann street.....            | West Randolph street.....  | West Lake street.....           | 220 00   |
| 5,844 | St. John place.....        | Carroll avenue.....        | Arbor place.....                | 107 50   |
| 5,845 | Hoyne avenue.....          | West Harrison street.....  | DeKalb street.....              | 187 00   |
| 5,849 | Twenty-sixth street.....   | State street.....          | Wentworth avenue.....           | 458 20   |
| 5,850 | Paulina street.....        | West Madison street.....   | West Lake street.....           | 374 10   |
| 5,851 | Paulina street.....        | West Harrison street.....  | West Polk street.....           | 1,234 05 |
| 5,852 | West Adams street.....     | Hoyne avenue.....          | Oakley avenue.....              | 459 75   |
| 5,853 | Front street.....          | Carpenter street.....      | Sangamon street.....            | 381 80   |
| 5,854 | DeKalb street.....         | Flournoy street.....       | Leavitt street.....             | 1,230 70 |
| 5,855 | Paulina street.....        | West Lake street.....      | West Indiana street.....        | 569 35   |
| 5,871 | Larrabee street.....       | Webster avenue.....        | Fullerton avenue.....           | 821 20   |
| 5,872 | Menominee street.....      | Sedgwick street.....       | Larrabee street.....            | 212 25   |
| 5,873 | Centre street.....         | Sedgwick street.....       | Halsted street.....             | 674 00   |
| 5,874 | Hurlbut street.....        | North avenue.....          | Fullerton avenue.....           | 254 80   |
| 5,875 | Mohawk street.....         | North avenue.....          | Garfield avenue.....            | 1,992 20 |
| 5,876 | Morgan street.....         | West Randolph street.....  | Fullerton street.....           | 214 00   |
| 5,883 | Sedgwick street.....       | Lincoln avenue.....        | Belden avenue.....              | 823 40   |
| 5,889 | Garfield avenue.....       | North Clark street.....    | Halsted street.....             | 818 90   |
| 5,895 | West Randolph street.....  | Halsted street.....        | Ogden avenue.....               | 2,331 00 |
| 5,896 | Paulina street.....        | West Indiana street.....   | West Chicago avenue.....        | 614 30   |
| 5,901 | Twenty-third street.....   | Wentworth avenue.....      | Hanover street.....             | 988 60   |
| 5,902 | Robey street.....          | West Lake street.....      | West Indiana street.....        | 200 40   |
| 5,903 | Paulina street.....        | West Division street.....  | Milwaukee avenue.....           | 242 95   |
| 5,939 | South Dearborn street..... | Twenty-seventh street..... | Thirty-third street.....        | 267 50   |
| 5,940 | Douglas avenue.....        | Michigan avenue.....       | L. S. & M. S. Railway.....      | 652 65   |
| 5,941 | Thirty-fourth street.....  | State street.....          | Indiana avenue.....             | 543 40   |
| 5,942 | Thirty-third street.....   | L. S. & M. S. Railway..... | South Park avenue.....          | 1,236 35 |
| 5,964 | Oakley avenue.....         | West Adams street.....     | Ogden avenue.....               | 3,825 80 |
| 5,965 | Campbell avenue.....       | West Madison street.....   | West Polk street.....           | 2,208 80 |
| 5,966 | West Adams street.....     | Western avenue.....        | Rockwell street.....            | 864 05   |



## STATEMENT OF ASSESSMENTS FOR LAYING WATER-SERVICE PIPES.—CONTINUED.

| Warrant No. | NAME OF STREET.               | FROM                       | TO                              | AMOUNT OF ASSESSMENT. |
|-------------|-------------------------------|----------------------------|---------------------------------|-----------------------|
| 5,967       | Wood street...                | West Indiana street.....   | West Chicago avenue.....        | \$523 80              |
| 5,968       | Forquer street.....           | Canal street.....          | Beach street.....               | 829 00                |
| 5,969       | Campbell place.....           | Leavitt street.....        | Oakley avenue.....              | 372 00                |
| 5,970       | Austin avenue.....            | Desplaines street.....     | May street.....                 | 828 50                |
| 5,971       | Brown street.....             | Maxwell street.....        | West Fourteenth street.....     | 511 00                |
| 5,972       | West Chicago avenue.....      | Milwaukee avenue.....      | Ashland avenue.....             | 535 35                |
| 5,973       | Wood street.....              | West Chicago avenue.....   | West Division street.....       | 2,173 40              |
| 5,974       | Southport avenue.....         | Clybourn place.....        | Fullerton avenue.....           | 1,975 05              |
| 5,983       | Aberdeen street.....          | West Harrison street.....  | West Polk street.....           | 502 20                |
| 5,984       | Halsted street.....           | West Randolph street.....  | West Indiana street.....        | 392 30                |
| 6,016       | Carroll avenue.....           | Ashland avenue.....        | Leavitt street.....             | 4,232 90              |
| 6,017       | Winchester avenue.....        | West Jackson street.....   | West Harrison street.....       | 249 65                |
| 6,018       | Ewing street.....             | South Halsted street.....  | Blue Island avenue.....         | 715 85                |
| 6,019       | Dearborn street.....          | Jackson street.....        | Polk street.....                | 4,494 60              |
| 6,020       | North Clark street.....       | Division street.....       | North avenue.....               | 212 00                |
| 6,021       | Chestnut street.....          | La Salle avenue.....       | Its eastern terminus.....       | 700 40                |
| 6,022       | Kingsbury street.....         | Erie street.....           | Chicago avenue.....             | 166 80                |
| 6,023       | St. Clair street.....         | Michigan street.....       | Indiana street.....             | 156 90                |
| 6,024       | Chicago avenue.....           | North Clark street.....    | North Branch Chicago river..... | 2,165 70              |
| 6,025       | Huron street.....             | North State street.....    | Cass street.....                | 154 40                |
| 6,034       | Liberty street.....           | Canal street.....          | Jefferson street.....           | 537 00                |
| 6,040       | West Twenty-first street..... | Blue Island avenue.....    | Western avenue.....             | 3,100 75              |
| 6,079       | Hudson avenue.....            | North avenue.....          | Centre street.....              | 2,474 50              |
| 6,087       | West Eighteenth street.....   | Canal street.....          | Union street.....               | 124 70                |
| 6,088       | Stanton avenue.....           | Douglas avenue.....        | Egan avenue.....                | 3,115 30              |
| 6,089       | Vernon avenue.....            | Douglas avenue.....        | Thirty-seventh street.....      | 1,068 50              |
| 6,090       | West Monroe street.....       | Ashland avenue.....        | Robey street.....               | 600 45                |
| 6,091       | Western avenue.....           | West Van Buren street..... | Ogden avenue.....               | 4,210 25              |
| 6,115       | North avenue.....             | Milwaukee avenue.....      | Western avenue.....             | 2,554 50              |
| 6,123       | Michigan avenue.....          | Douglas avenue.....        | Egan avenue.....                | 5,802 00              |

|       |                     |                          |                                 |              |
|-------|---------------------|--------------------------|---------------------------------|--------------|
| 6,170 | Tell place.....     | Milwaukee avenue.....    | Ashland avenue.....             | 261 00       |
| 6,172 | Paulina street..... | West Chicago avenue..... | West Division street.....       | 1,095 65     |
| 6,176 | Indiana avenue..... | Thirtieth street.....    | Egan avenue.....                | 8,441 90     |
| 6,248 | Ogden avenue.....   | West Madison street..... | West Randolph street.....       | 843 50       |
| 6,261 | Pitney court.....   | Archer avenue.....       | Thirty-first street.....        | 582 85       |
| 6,286 | Wood street.....    | Milwaukee avenue.....    | North avenue.....               | 568 70       |
| 6,313 | Hobbie street.....  | Hawthorn avenue.....     | Sedgwick street.....            | 194 60       |
| 6,314 | Elm street.....     | Crosby street.....       | North Wells street.....         | 723 40       |
| 6,318 | Lincoln place.....  | Garfield avenue.....     | Webster avenue.....             | 469 00       |
| 6,336 | Archer avenue.....  | Halsted street.....      | South Branch Chicago river..... | 8,581 40     |
|       |                     |                          |                                 | \$114,287 45 |

## STATEMENT OF ASSESSMENTS FOR LAYING PLANK SIDEWALKS.

| Warrant No. | SIDE. | NAME OF STREET.        | FROM                   | TO                   | AMOUNT OF ASSESSMENT. |
|-------------|-------|------------------------|------------------------|----------------------|-----------------------|
| 5,651       | B     | Bryson street.         | Leavitt street.        | Western avenue       | \$639 54              |
| 5,670       | B     | Twenty-ninth street.   | Stewart avenue.        | Halsted street.      | 362 90                |
| 5,673       | B     | Dania street.          | West Division street.  | North avenue.        | 171 99                |
| 5,674       | B     | Augusta street.        | Milwaukee avenue.      | Elston avenue.       | 249 08                |
| 5,675       | B     | Brigham street.        | Wood street.           | Ashland avenue.      | 386 08                |
| 5,676       | B     | Rockwell street.       | West Division street.  | North avenue.        | 300 20                |
| 5,677       | B     | Washtenaw avenue.      | West Division street.  | North avenue.        | 823 62                |
| 5,678       | E     | Fairfield avenue.      | Hirsch street.         | North avenue.        | 245 68                |
| 5,679       | S     | West Superior street.  | May street.            | North Centre avenue  | 85 60                 |
| 5,680       | B     | Racine avenue.         | Clybourn avenue.       | Fullerton avenue.    | 432 06                |
| 5,681       | B     | Lytle street.          | West Harrison street.  | West Twelfth street. | 902 54                |
| 5,682       | B     | Ogden avenue.          | West Van Buren street. | West Twelfth street. | 2,659 14              |
| 5,683       | B     | Canal street.          | West Polk street.      | West Twelfth street. | 467 46                |
| 5,684       | B     | West Twelfth street.   | Canal street.          | Blue Island avenue.  | 767 60                |
| 5,685       | B     | Ewing street.          | Canal street.          | Halsted street.      | 202 02                |
| 5,686       | B     | Plum street.           | Loomis street.         | Lafin street.        | 263 53                |
| 5,687       | B     | Charles place.         | Fifth avenue.          | Franklin street.     | 233 00                |
| 5,688       | B     | Carpenter street.      | West Madison street.   | West Indiana street. | 1,261 22              |
| 5,689       | B     | West Van Buren street. | Canal street.          | Halsted street.      | 645 03                |
| 5,690       | S     | West Ohio street.      | Desplaines street.     | Union street.        | 105 00                |
| 5,691       | B     | Scott street.          | North State street.    | Lake Shore drive.    | 250 04                |
| 5,692       | B     | Carroll avenue.        | May street.            | Leavitt street.      | 644 05                |
| 5,693       | B     | Vincennes avenue.      | Douglas avenue.        | Egan avenue.         | 701 10                |
| 5,694       | B     | Shober street.         | West Division street.  | North avenue.        | 372 40                |
| 5,695       | B     | Blue Island avenue.    | West Harrison street.  | West Twelfth street. | 949 66                |
| 5,696       | B     | Leavitt street.        | Twenty-second street.  | Blue Island avenue.  | 607 62                |
| 5,697       | B     | Congress street.       | Fifth avenue.          | Franklin street.     | 168 00                |
| 5,698       | B     | Rush street.           | Superior street.       | Cedar street.        | 275 88                |
| 5,699       | B     | Schiller street.       | Sedgwick street.       | Lake Shore drive.    | 553 66                |
| 5,700       | B     | West Lake street.      | Maplewood avenue.      | Rockwell street.     | 121 20                |



|       |   |                            |                            |                             |          |
|-------|---|----------------------------|----------------------------|-----------------------------|----------|
| 5,710 | B | Clark street.....          | Van Buren street.....      | Twelfth street.....         | 1,982 02 |
| 5,711 | S | Ferdinand street... ..     | Ashland avenue.....        | Paulina street.....         | 174 24   |
| 5,712 | B | Banker street.....         | Stewart avenue.....        | Halsted street.....         | 291 64   |
| 5,713 | B | Hanover street.....        | Archer avenue.....         | Twenty-ninth street.....    | 214 32   |
| 5,714 | B | West Adams.....            | Lafin street.....          | Ashland avenue.....         | 69 60    |
| 5,715 | B | Parnell avenue.....        | Twenty-ninth street.....   | Egan avenue.....            | 962 00   |
| 5,716 | B | Fairfield avenue.....      | Fillmore street.....       | Ogden avenue.....           | 454 10   |
| 5,717 | B | Wood street.....           | Rebecca street.....        | West Twelfth street.....    | 410 02   |
| 5,718 | B | Chestnut street.....       | North Clark street.....    | Pine street.....            | 276 44   |
| 5,719 | B | Walnut street.....         | Ashland avenue.....        | Western avenue.....         | 1,485 36 |
| 5,732 | B | Delaware place.....        | Dearborn avenue.....       | Pine street.....            | 297 54   |
| 5,738 | B | West Kinzie street... ..   | Union street.....          | Carpenter street.....       | 180 74   |
| 5,739 | B | Desplaines street.....     | West Harrison street.....  | West Ohio street.....       | 2,167 34 |
| 5,740 | B | McGregor street.....       | Wentworth avenue.....      | Halsted street.....         | 877 27   |
| 5,741 | B | Irving avenue.....         | Fulton street.....         | West Kinzie street.....     | 153 27   |
| 5,742 | W | Fairfield avenue.....      | North avenue.....          | Hirsch street.....          | 391 20   |
| 5,743 | B | West Adams street.....     | Rockwell street.....       | California avenue.....      | 469 68   |
| 5,744 | N | Iowa street.....           | Lincoln street.....        | Robey street.....           | 120 00   |
| 5,745 | B | West Ohio street.....      | Ashland avenue.....        | Western avenue.....         | 790 69   |
| 5,746 | B | West Van Buren street..... | Halsted street.....        | Leavitt street.....         | 1,436 89 |
| 5,747 | B | Maplewood avenue.....      | West Division street.....  | North avenue.....           | 194 22   |
| 5,748 | B | Molke street.....          | Western avenue.....        | California avenue.....      | 656 01   |
| 5,754 | B | May street... ..           | West Polk street.....      | West Taylor street.....     | 183 04   |
| 5,755 | W | Dudley street.....         | West Chicago avenue.....   | Augusta street.....         | 230 88   |
| 5,756 | B | Morgan street.....         | West Indiana street.....   | Milwaukee avenue.....       | 326 98   |
| 5,757 | B | Halsted street.....        | Clay street.....           | Fallerton avenue.....       | 764 60   |
| 5,758 | B | Loomis street.....         | West Twelfth street.....   | Blue Island avenue.....     | 474 68   |
| 5,759 | B | Webster avenue.....        | Dayton street.....         | Dominick street.....        | 369 54   |
| 5,760 | B | Goehe street.....          | Sedgwick street.....       | Lake Shore drive.....       | 526 30   |
| 5,761 | W | Blue Island avenue.....    | Ashland avenue.....        | Western avenue.....         | 1,071 89 |
| 5,763 | B | West Twelfth street.....   | Blue Island avenue.....    | Ashland avenue.....         | 1,503 56 |
| 5,763 | B | Newberry avenue.....       | West Sixteenth street..... | West Eighteenth street..... | 428 64   |
| 5,764 | B | Colorado avenue.....       | California avenue.....     | Albany avenue.....          | 436 62   |
| 5,765 | W | Robey street.....          | West Kinzie street.....    | West Ohio street.....       | 98 80    |
| 5,766 | N | Thirty-seventh street..... | Wentworth avenue.....      | Stewart avenue.....         | 219 18   |
| 5,767 | B | Chatham street.....        | Hobbie street.....         | Division street.....        | 159 90   |

## STATEMENT OF ASSESSMENTS FOR LAYING PLANK SIDEWALKS.—CONTINUED.

| Warrant No. | SIDE. | NAME OF STREET.            | FROM                       | TO                        | AMOUNT OF ASSESSMENT. |
|-------------|-------|----------------------------|----------------------------|---------------------------|-----------------------|
| 5,768       | B     | Crosby street.....         | Larrabee street.....       | Division street.....      | \$504 83              |
| 5,769       | B     | Walton place.....          | Dearborn avenue.....       | Pine street.....          | 238 70                |
| 5,770       | B     | Cornell street.....        | Milwaukee avenue.....      | Ashland avenue.....       | 881 15                |
| 5,771       | B     | Hanover street.....        | Thirty-first street.....   | Thirty-third street.....  | 400 14                |
| 5,820       | B     | Twenty-ninth street.....   | L. S. & M. S. Railway..... | Its eastern terminus..... | 575 70                |
| 5,821       | B     | Wabash avenue.....         | Douglas avenue.....        | Egan avenue.....          | 1,417 84              |
| 5,822       | B     | Loughton street.....       | Hoyne avenue.....          | Leavitt street.....       | 125 20                |
| 5,823       | B     | West Ohio street.....      | Union street.....          | Ashland avenue.....       | 684 00                |
| 5,824       | B     | West Polk street.....      | Halsted street.....        | Centre avenue.....        | 1,234 21              |
| 5,825       | B     | Banks street.....          | North State street.....    | Lake Shore drive.....     | 203 80                |
| 5,826       | B     | Warren avenue.....         | Oakley avenue.....         | California avenue.....    | 473 10                |
| 5,856       | N     | West Kinzie street.....    | Carpenter street.....      | Robey street.....         | 599 64                |
| 5,857       | B     | Fulton street.....         | Ashland avenue.....        | Western avenue.....       | 794 76                |
| 5,858       | B     | Gano street.....           | Prairie avenue.....        | South Park avenue.....    | 223 10                |
| 5,859       | B     | Twenty-sixth street.....   | State street.....          | Its eastern terminus..... | 334 40                |
| 5,860       | B     | Park avenue.....           | Lincoln avenue.....        | Western avenue.....       | 534 40                |
| 5,861       | B     | West Lake street.....      | Ashland avenue.....        | Maplewood avenue.....     | 2,101 10              |
| 5,877       | N     | West Twentieth street..... | Ashland avenue.....        | Blue Island avenue.....   | 160 00                |
| 5,878       | B     | Oakley avenue.....         | West Lake street.....      | West Chicago avenue.....  | 712 25                |
| 5,892       | B     | West Lake street.....      | Homan avenue.....          | Crawford avenue.....      | 753 32                |
| 6,084       | B     | Butterfield street.....    | Sixteenth street.....      | Twenty-second street..... | 978 80                |
| 6,085       | B     | Quincy street.....         | State street.....          | Dearborn street.....      | 5,550 67              |
| 6,086       | B     | Oak avenue.....            | Vincennes avenue.....      | Stanton avenue.....       | 4,169 48              |
| 6,120       | N     | Avon place.....            | Hoyne avenue.....          | Western terminus.....     | 154 00                |
| 6,121       | S     | Bryant avenue.....         | Vincennes avenue.....      | Stanton avenue.....       | 90 00                 |
| 6,126       | E     | Francisco street.....      | West Lake street.....      | Fulton street.....        | 114 00                |
| 6,127       | B     | Twentieth street.....      | Clark street.....          | Blackwell street.....     | 126 89                |
| 6,128       | B     | Thirty first street.....   | L. S. & M. S. Railway..... | Eastern terminus.....     | 434 72                |
| 6,139       | B     | Springfield avenue.....    | West Indiana street.....   | West Huron street.....    | 118 80                |
| 6,130       | S     | Sixteenth street.....      | State street.....          | Prairie avenue.....       | 95 50                 |



|       |   |                                |                            |                                |          |
|-------|---|--------------------------------|----------------------------|--------------------------------|----------|
| 6,131 | E | Ashland avenue.....            | Archer avenue.....         | Thirty-second street.....      | 242 19   |
| 6,132 | E | Nassau street.....             | West Jackson street.....   | West Van Buren street.....     | 130 00   |
| 6,133 | B | West Twenty-fifth street.....  | Trumbull avenue.....       | Central Park avenue.....       | 200 00   |
| 6,134 | B | Ashland avenue.....            | Thirty-second street.....  | Douglas avenue.....            | 265 59   |
| 6,135 | B | Cottage Grove avenue.....      | Thirty-seventh street..... | Egan avenue.....               | 175 20   |
| 6,136 | E | Crawford avenue.....           | West Lake street.....      | West Kinzie street.....        | 262 00   |
| 6,137 | B | Robey street.....              | West Lake street.....      | West Chicago avenue.....       | 579 00   |
| 6,138 | B | West Seventeenth street.....   | Ashland avenue.....        | Paulina street.....            | 120 00   |
| 6,139 | B | Robey street.....              | C. B. & Q. Railroad.....   | Blue Island avenue.....        | 877 64   |
| 6,140 | B | Johnson place.....             | Thirty-eighth street.....  | Egan avenue.....               | 204 05   |
| 6,141 | B | Thirty-fourth street.....      | Indiana avenue.....        | Butterfield street.....        | 377 72   |
| 6,142 | N | Egan avenue.....               | L. S. & M. S. Railway..... | Cottage Grove avenue.....      | 422 56   |
| 6,143 | B | Thirty-sixth street.....       | State street.....          | Indiana avenue.....            | 386 46   |
| 6,144 | B | Talman avenue.....             | West Lake street.....      | Fulton street.....             | 230 49   |
| 6,145 | B | Thirty-fourth street.....      | South Park avenue.....     | Rhodes avenue.....             | 231 45   |
| 6,146 | W | Kedzie avenue.....             | West Madison street.....   | West Lake street.....          | 281 76   |
| 6,147 | B | Thirty-eighth street.....      | State street.....          | Butterfield street.....        | 201 60   |
| 6,148 | B | Leavitt street.....            | West Indiana street.....   | West Chicago avenue.....       | 137 60   |
| 6,149 | B | West Huron street.....         | Robey street.....          | Leavitt street.....            | 193 20   |
| 6,150 | B | Halsted street.....            | West Van Buren street..... | West Twelfth street.....       | 1,783 44 |
| 6,151 | B | Ullman street.....             | Thirty-first street.....   | Thirty-fourth street.....      | 809 87   |
| 6,152 | B | Mary street.....               | Hickory street.....        | Archer avenue.....             | 131 60   |
| 6,153 | B | Twenty-fifth street.....       | L. S. & M. S. Railway..... | Eastern terminus.....          | 673 40   |
| 6,154 | B | Thirty-third court.....        | Halsted street.....        | Laurel street.....             | 300 30   |
| 6,155 | N | Thirty-third street.....       | L. S. & M. S. Railway..... | Halsted street.....            | 635 30   |
| 6,156 | B | Tell place.....                | Milwaukee avenue.....      | Ashland avenue.....            | 142 00   |
| 6,157 | B | Leavitt street.....            | West Sixteenth street..... | West Twenty-second street..... | 605 32   |
| 6,158 | B | Cornelia street.....           | Milwaukee avenue.....      | Ashland avenue.....            | 356 82   |
| 6,159 | B | Hinman street.....             | Ashland avenue.....        | Western avenue.....            | 1,044 88 |
| 6,160 | B | Lincoln street.....            | West Twelfth street.....   | Blue Island avenue.....        | 234 80   |
| 6,161 | B | Hoyne avenue.....              | West Sixteenth street..... | Blue Island avenue.....        | 1,067 45 |
| 6,162 | B | West Twenty-second street..... | Ashland avenue.....        | Western avenue.....            | 1,221 37 |
| 6,163 | B | Berlin street.....             | Leavitt street.....        | Western avenue.....            | 561 26   |
| 6,164 | N | Austin avenue.....             | Western avenue.....        | Seymour street.....            | 102 00   |
| 6,179 | B | Lee place.....                 | Robey street.....          | Hoyne avenue.....              | 355 30   |
| 6,183 | B | Sheldon street.....            | West Madison street.....   | Arbor place.....               | 881 14   |



## STATEMENT OF ASSESSMENTS FOR LAYING PLANK SIDEWALKS.—CONTINUED.

| Warrant No. | SIDE. | NAME OF STREET.           | FROM                       | TO                        | AMOUNT OF ASSESSMENT. |
|-------------|-------|---------------------------|----------------------------|---------------------------|-----------------------|
| 6,184       | N     | Erie street.....          | Pine street.....           | Eastern terminus.....     | \$193 73              |
| 6,185       | W     | Shober street.....        | North avenue.....          | Wabansia avenue.....      | 80 00                 |
| 6,186       | B     | Clinton street.....       | West Harrison street.....  | West Twelfth street.....  | 587 00                |
| 6,187       | B     | Samuel street.....        | West Chicago avenue.....   | West Division street..... | 569 98                |
| 6,188       | B     | Homar street.....         | Robey street.....          | Leavitt street.....       | 257 40                |
| 6,189       | B     | Kramer street.....        | Jefferson street.....      | Halsted street.....       | 167 30                |
| 6,190       | S     | West Madison street.....  | California avenue.....     | Homan avenue.....         | 195 18                |
| 6,191       | B     | Yeaton street.....        | Wood street.....           | Lincoln street.....       | 184 41                |
| 6,192       | B     | Dashiel street.....       | Thirty-seventh street..... | Thirty-eighth street..... | 184 40                |
| 6,193       | B     | Smart street.....         | West Kinzie street.....    | Austin avenue.....        | 110 00                |
| 6,194       | B     | West Division street..... | Robey street.....          | California avenue.....    | 479 89                |
| 6,195       | B     | Hirsch street.....        | Western avenue.....        | California avenue.....    | 438 52                |
| 6,196       | B     | Seymour street.....       | West Division street.....  | North avenue.....         | 139 20                |
| 6,197       | B     | Bismarck street.....      | Rockwell street.....       | California avenue.....    | 535 02                |
| 6,198       | B     | Ashland avenue.....       | West Kinzie street.....    | West Chicago avenue.....  | 480 26                |
| 6,199       | B     | West Polk street.....     | Campbell avenue.....       | Rockwell street.....      | 60 00                 |
| 6,200       | B     | Werder street.....        | Rockwell street.....       | California avenue.....    | 459 04                |
| 6,201       | B     | Bloom street.....         | Douglas avenue.....        | Thirty-sixth street.....  | 306 66                |
| 6,202       | B     | Western avenue.....       | West Lake street.....      | West Kinzie street.....   | 188 76                |
| 6,203       | B     | Rose street.....          | West Chicago avenue.....   | Cornell street.....       | 106 00                |
| 6,204       | B     | O'Neill street.....       | Halsted street.....        | Western terminus.....     | 156 80                |
| 6,205       | B     | Thompson street.....      | Western avenue.....        | California avenue.....    | 384 78                |
| 6,206       | B     | Davis street.....         | West Division street.....  | North avenue.....         | 184 40                |
| 6,207       | B     | Oakley avenue.....        | West Division street.....  | North avenue.....         | 557 22                |
| 6,208       | B     | West Division street..... | Milwaukee avenue.....      | Lincoln street.....       | 521 85                |
| 6,209       | B     | West Division street..... | Lincoln street.....        | Robey street.....         | 408 48                |
| 6,210       | B     | Seymour street.....       | West Lake street.....      | C. & N.W. Railway.....    | 366 32                |
| 6,211       | B     | West Monroe street.....   | Canal street.....          | Green street.....         | 485 60                |
| 6,212       | B     | West Monroe street.....   | Green street.....          | Aberdeen street.....      | 210 21                |
| 6,213       | B     | Noble street.....         | West Kinzie street.....    | West Chicago avenue.....  | 288 21                |

|       |   |                             |                                 |                                |          |
|-------|---|-----------------------------|---------------------------------|--------------------------------|----------|
| 6,214 | B | Peoria street.....          | West Madison street.....        | West Randolph street.....      | 123 50   |
| 6,215 | B | Leavitt street.....         | West Lake street.....           | West Indiana street.....       | 205 20   |
| 6,216 | B | Wieland street.....         | Schiller street.....            | North avenue.....              | 157 60   |
| 6,217 | B | May street.....             | Austin avenue.....              | West Kinzie street.....        | 122 40   |
| 6,218 | E | Rockwell street.....        | West Madison street.....        | West Jackson street.....       | 283 72   |
| 6,219 | B | Canalport avenue.....       | Johnson street.....             | Brown street.....              | 451 50   |
| 6,220 | B | West Madison street.....    | Western avenue.....             | California avenue.....         | 1,045 45 |
| 6,221 | B | Grant place.....            | North Clark street.....         | Larrabee street.....           | 303 81   |
| 6,222 | B | Fullerton avenue.....       | North Branch Chicago river..... | Elston avenue.....             | 141 20   |
| 6,223 | B | Kendall street.....         | West Polk street.....           | West Taylor street.....        | 403 94   |
| 6,224 | B | West Nineteenth street..... | Centre avenue.....              | Ashland avenue.....            | 199 60   |
| 6,225 | B | Allport street.....         | West Sixteenth street.....      | West Twenty-second street..... | 265 59   |
| 6,226 | B | Liberty street.....         | Stewart avenue.....             | Halsted street.....            | 285 36   |
| 6,227 | B | Throop street.....          | West Sixteenth street.....      | West Twenty-second street..... | 980 65   |
| 6,228 | B | Ada street.....             | West Madison street.....        | West Erie street.....          | 370 88   |
| 6,229 | B | West Huron street.....      | Milwaukee avenue.....           | Robey street.....              | 770 71   |
| 6,230 | B | West Lake street.....       | Ada street.....                 | Ashland avenue.....            | 228 40   |
| 6,231 | B | Western avenue.....         | West Sixteenth street.....      | Blue Island avenue.....        | 1,129 98 |
| 6,232 | B | Wood street.....            | West Division street.....       | Milwaukee avenue.....          | 176 00   |
| 6,233 | B | West Erie street.....       | Union street.....               | Western avenue.....            | 958 74   |
| 6,234 | B | Millard avenue.....         | Ogden avenue.....               | West Twenty-sixth street.....  | 1,088 05 |
| 6,235 | B | Central Park avenue.....    | Ogden avenue.....               | West Twenty-sixth street.....  | 1,083 43 |
| 6,236 | B | Genessee avenue.....        | Ogden avenue.....               | West Twenty-sixth street.....  | 869 50   |
| 6,237 | S | Genessee avenue.....        | Douglas Park avenue.....        | Genessee avenue.....           | 462 46   |
| 6,238 | B | Macedonia street.....       | West Division street.....       | Ellen street.....              | 177 80   |
| 6,239 | B | Marion place.....           | West Division street.....       | Ellen street.....              | 358 14   |
| 6,240 | B | Hayne's court.....          | Archer avenue.....              | Lyman street.....              | 261 69   |
| 6,241 | B | Wood street.....            | West Madison street.....        | West Chicago avenue.....       | 470 44   |
| 6,242 | B | Curtis street.....          | West Washington street.....     | West Erie street.....          | 625 85   |
| 6,243 | B | Warren avenue.....          | Ashland avenue.....             | Lincoln street.....            | 285 00   |
| 6,244 | B | West Lake street.....       | Canal street.....               | Ada street.....                | 1,479 00 |
| 6,245 | B | Sangamon street.....        | West Lake street.....           | West Ohio street.....          | 329 96   |
| 6,246 | B | Lafin street.....           | West Madison street.....        | West Harrison street.....      | 418 76   |
| 6,249 | B | Ashland avenue.....         | West Twelfth street.....        | Rebecca street.....            | 811 86   |
| 6,250 | B | Ashland avenue.....         | Rebecca street.....             | West Twenty-second street..... | 561 80   |
| 6,256 | B | Dearborn street.....        | Van Buren street.....           | Polk street.....               | 3,381 55 |



## STATEMENT OF ASSESSMENTS FOR LAYING PLANK SIDEWALKS.

| Warrant No. | SIDE. | NAME OF STREET.           | FROM                     | TO                         | AMOUNT OF ASSESSMENT. |
|-------------|-------|---------------------------|--------------------------|----------------------------|-----------------------|
| 6,264       | B     | Lincoln street.....       | West Madison street..... | West Taylor street.....    | \$1,386 20            |
| 6,265       | B     | Thirty-third street.....  | Halsted street.....      | Laurel street.....         | 692 82                |
| 6,266       | B     | Locust street.....        | North Market street..... | Sedgwick street.....       | 309 48                |
| 6,267       | B     | Lincoln street.....       | West Taylor street.....  | West Twelfth street.....   | 240 80                |
| 6,268       | B     | Hamilton avenue.....      | West Monroe street.....  | Pratt place.....           | 184 05                |
| 6,269       | B     | Hamlin avenue.....        | West Lake street.....    | West Kinzie street.....    | 326 00                |
| 6,270       | B     | West Polk street.....     | Canal street.....        | Halsted street.....        | 305 95                |
| 6,271       | B     | Wade street.....          | Elston avenue.....       | Crittenden street.....     | 331 48                |
| 6,272       | B     | Wallace street.....       | Archer avenue.....       | Egan avenue.....           | 1,435 97              |
| 6,273       | B     | Artesian avenue.....      | West Lake street.....    | West Kinzie street.....    | 115 20                |
| 6,274       | S     | West Huron street.....    | Central Park avenue..... | Avers avenue.....          | 473 86                |
| 6,275       | E     | Crawford avenue.....      | West Madison street..... | West Lake street.....      | 459 42                |
| 6,276       | B     | Butterfield street.....   | Thirtieth street.....    | Egan avenue.....           | 965 70                |
| 6,277       | N     | Warren avenue.....        | Albany avenue.....       | Homan avenue.....          | 403 37                |
| 6,278       | B     | Milwaukee avenue.....     | West Kinzie street.....  | West Chicago avenue.....   | 778 44                |
| 6,279       | B     | West Indiana street.....  | Desplaines street.....   | Elizabeth street.....      | 1,216 43              |
| 6,280       | B     | West Madison street.....  | Ashland avenue.....      | Western avenue.....        | 1,371 96              |
| 6,281       | B     | Sebor street.....         | Desplaines street.....   | Halsted street.....        | 432 82                |
| 6,282       | B     | Ogden avenue.....         | West Madison street..... | West Van Buren street..... | 577 94                |
| 6,283       | B     | Emerson avenue.....       | Wood street.....         | Western avenue.....        | 116 00                |
| 6,284       | B     | West Superior street..... | Halsted street.....      | Ashland avenue.....        | 803 27                |
| 6,285       | B     | Kingsbury street.....     | Eric street.....         | Chicago avenue.....        | 130 00                |
| 6,286       | B     | Krøger street.....        | Sheffield avenue.....    | Racine avenue.....         | 119 60                |
| 6,287       | B     | Willow street.....        | Larrabee street.....     | Sheffield avenue.....      | 157 50                |
| 6,288       | B     | Lime street.....          | Archer avenue.....       | Twenty-seventh street..... | 98 00                 |
| 6,289       | B     | Thirty-third street.....  | Wentworth avenue.....    | Stewart avenue.....        | 290 20                |
| 6,290       | B     | Rhodes avenue.....        | Thirty-first street..... | Douglas avenue.....        | 382 08                |
| 6,291       | B     | Albany avenue.....        | West Lake street.....    | Walnut street.....         | 203 60                |
| 6,292       | W     | Third avenue.....         | Van Buren street.....    | Harrison street.....       | 245 92                |
| 6,293       | B     | Lubeck street.....        | Robey street.....        | Western avenue.....        | 939 61                |



|       |   |                       |                               |                                |              |
|-------|---|-----------------------|-------------------------------|--------------------------------|--------------|
| 6,294 | B | Frankfort street..... | Robey street.....             | Western avenue.....            | 920 98       |
| 6,408 | W | Allport street.....   | West Twenty-first street..... | West Twenty-second street..... | 236 40       |
|       |   |                       |                               |                                | \$124,287 45 |

## STATEMENT OF ASSESSMENTS FOR LAYING STONE SIDEWALKS.

| Warrant No. | SIDE. | NAME OF STREET.           | FROM                  | TO                       | AMOUNT OF ASSESSMENT. |
|-------------|-------|---------------------------|-----------------------|--------------------------|-----------------------|
| 6,000       | B     | Twenty-second street..... | Indiana avenue.....   | South Park avenue.....   | \$ 4,539 47           |
| 6,001       | B     | Calumet avenue.....       | Twentieth street..... | Twenty-sixth street..... | 12,877 41             |
|             |       |                           |                       |                          | \$17,406 80           |

## STATEMENT OF ASSESSMENTS FOR ERECTING GAS LAMP POSTS.

| Warrant No. | No. of Posts. | NAME OF STREET.             | FROM                      | TO                              | AMOUNT OF ASSESSMENT. |
|-------------|---------------|-----------------------------|---------------------------|---------------------------------|-----------------------|
| 5,591       | 4             | Lafin street.....           | West Madison street.....  | West Adams street.....          | \$125 76              |
| 5,592       | 13            | May street.....             | West Harrison street..... | West Twelfth street.....        | 408 72                |
| 5,593       | 11            | Leavitt street.....         | West Madison street.....  | West Lake street.....           | 345 84                |
| 5,594       | 7             | Fullerton avenue.....       | Halsted street.....       | Fremont street.....             | 220 08                |
| 5,595       | 14            | West Eighteenth street..... | Blue Island avenue.....   | Ashland avenue.....             | 440 16                |
| 5,596       | 10            | Banks.....                  | North State street.....   | Lake Shore Drive.....           | 314 40                |
| 5,597       | 10            | Fulton street.....          | Wood street.....          | Western avenue.....             | 314 40                |
| 5,598       | 6             | Western avenue.....         | West Lake street.....     | Fulton street.....              | 188 64                |
| 5,599       | 18            | Lincoln street..            | West Division street..... | Milwaukee avenue.....           | 565 92                |
| 5,600       | 13            | Emma street.....            | Milwaukee avenue.....     | Ashland avenue.....             | 408 72                |
| 5,601       | 4             | Ogden avenue.....           | West Madison street.....  | West Monroe street.....         | 125 76                |
| 5,602       | 27            | Paulina street.....         | Milwaukee avenue.....     | Wabansia avenue.....            | 821 88                |
| 5,603       | 4             | North Franklin street.....  | Ontario street.....       | Chicago avenue.....             | 125 76                |
| 5,604       | 25            | Evergreen avenue ..         | Milwaukee avenue ..       | Leavitt street.....             | 761 00                |
| 5,605       | 7             | Lafin street.....           | West Van Buren street..   | West Harrison street.....       | 220 08                |
| 5,606       | 16            | West Lake street.....       | Ashland avenue.....       | Oakley avenue.....              | 508 04                |
| 5,607       | 7             | Fowler street.....          | Hoyle avenue.....         | Leavitt street.....             | 220 08                |
| 5,608       | 5             | Ogden avenue.....           | West Monroe street.....   | West Adams street.....          | 157 20                |
| 5,609       | 69            | North avenue.....           | Milwaukee avenue.....     | North Branch Chicago River..... | 1,963 36              |
| 5,610       | 16            | Desplaines street.....      | West Harrison street..... | West Twelfth street.....        | 508 04                |
| 5,611       | 9             | West Eighteenth street..... | Alhport street ..         | Blue Island avenue.....         | 283 96                |
| 5,612       | 2             | Carpenter street.....       | Fulton street.....        | Carroll avenue.....             | 67 88                 |
| 5,613       | 8             | Hoyle avenue.....           | Bryson street.....        | Fowler street.....              | 251 52                |
| 5,786       | 5             | Dayton street.....          | Webster avenue.....       | Belden avenue.....              | 157 20                |
| 5,790       | 4             | Rhodes avenue.....          | Thirty-third street.....  | Thirty-fourth street.....       | 125 76                |
| 5,791       | 4             | Cedar street.....           | Rush street.....          | Lake Shore Drive.....           | 125 76                |
| 5,792       | 6             | Racine avenue.....          | Webster avenue ..         | Belden avenue.....              | 188 64                |
| 5,793       | 2             | West Twelfth street.....    | May street.....           | Blue Island avenue.....         | 67 88                 |
| 5,794       | 20            | Clybourn avenue ..          | Western avenue.....       | Fullerton avenue.....           | 628 80                |
| 5,795       | 7             | Ogden avenue.....           | West Twelfth street ..    | About 600 feet Southwest. . .   | 220 08                |

|       |    |                            |                            |                            |          |
|-------|----|----------------------------|----------------------------|----------------------------|----------|
| 5,796 | 59 | South La Salle street..... | Archer avenue.....         | Thirty-first street.....   | 1,677 96 |
| 5,797 | 8  | Twenty-seventh street..... | South La Salle street..... | State street.....          | 251 52   |
| 5,798 | 2  | Twenty-third street.....   | Wentworth avenue.....      | South La Salle street..... | 67 88    |
| 5,799 | 6  | Lincoln avenue.....        | Belden avenue.....         | Fullerton avenue.....      | 188 64   |
| 5,800 | 4  | Belden avenue.....         | North Clark street.....    | About 400 feet east.....   | 125 76   |
| 5,801 | 3  | St. Clair street.....      | Ohio street.....           | Ontario street.....        | 99 32    |
| 5,802 | 6  | Center street.....         | Bissell street.....        | Sheffield avenue.....      | 188 64   |
| 5,803 | 5  | Twentieth street.....      | State street.....          | Clark street.....          | 157 20   |
| 5,804 | 5  | West Polk street.....      | Western avenue.....        | Campbell avenue.....       | 157 20   |
| 5,805 | 12 | Campbell avenue.....       | West Harrison street.....  | West Polk street.....      | 377 28   |
| 5,806 | 2  | Rhodes avenue.....         | Thirty-first street.....   | About 200 feet south.....  | 67 88    |
| 5,808 | 7  | Leavitt street.....        | West Monroe street.....    | West Congress street.....  | 220 08   |
| 5,809 | 5  | Vernon avenue.....         | Thirty-first street.....   | Thirty-second street.....  | 157 20   |
| 5,810 | 26 | Ashland avenue.....        | Milwaukee avenue.....      | North avenue.....          | 791 44   |
| 5,811 | 15 | West Harrison street.....  | Western avenue.....        | Rockwell street.....       | 471 20   |
| 5,812 | 19 | Homan avenue.....          | West Madison street.....   | West Lake street.....      | 798 25   |
| 5,813 | 3  | Hills street.....          | North Wells street.....    | Its Eastern terminus.....  | 99 32    |
| 5,814 | 6  | Paulina street.....        | Warren avenue.....         | Park avenue.....           | 188 64   |
| 5,815 | 5  | Lexington street.....      | Western avenue.....        | Campbell avenue.....       | 157 20   |
| 5,816 | 14 | Wood street.....           | Milwaukee avenue.....      | North avenue.....          | 440 16   |
| 5,817 | 30 | North avenue.....          | Milwaukee avenue.....      | Western avenue.....        | 943 64   |
| 5,818 | 17 | Western avenue.....        | Fulton street.....         | West Indiana street.....   | 534 48   |
| 5,819 | 2  | Greshaw street.....        | Idaho street.....          | Western avenue.....        | 67 88    |
| 5,827 | 7  | Gano street.....           | Prairie avenue.....        | South Park avenue.....     | 220 08   |
| 5,828 | 2  | Twelfth street.....        | Michigan avenue.....       | Indiana avenue.....        | 67 88    |
| 5,829 | 18 | Fullerton avenue.....      | Southport avenue.....      | Clybourn avenue.....       | 565 92   |
| 5,830 | 5  | Armour street.....         | West Kinzie street.....    | West Indiana street.....   | 157 20   |
| 5,831 | 5  | Fremont street.....        | Webster avenue.....        | Belden avenue.....         | 157 20   |
| 5,832 | 3  | Belden avenue.....         | Fremont street.....        | Dayton street.....         | 99 32    |
| 5,833 | 3  | Sedgwick court.....        | Division street.....       | Elm street.....            | 99 32    |
| 5,834 | 4  | Lake Park avenue.....      | Thirty-first street.....   | About 480 feet south.....  | 125 76   |
| 5,835 | 3  | Graves place.....          | Cottage Grove avenue.....  | Thirty-third street.....   | 99 32    |
| 5,839 | 13 | Flournoy street.....       | West Van Buren street..... | Rockwell street.....       | 408 73   |
| 5,840 | 15 | Oakley avenue.....         | West Harrison street.....  | West Polk street.....      | 471 60   |
| 5,841 | 31 | Western avenue.....        | Ashland avenue.....        | West Twelfth street.....   | 943 64   |
| 5,846 | 10 | Augusta street.....        |                            | Paulina street.....        | 314 40   |



## STATEMENT OF ASSESSMENTS FOR ERECTING GAS LAMP POSTS.—CONTINUED.

| Warrant No. | No. of Posts. | NAME OF STREET.            | FROM                            | TO                         | AMOUNT OF ASSESSMENT. |
|-------------|---------------|----------------------------|---------------------------------|----------------------------|-----------------------|
| 5,847       | 4             | Idaho street.....          | Grenshaw street.....            | About 300 feet north.....  | \$ 125 76             |
| 5,848       | 9             | Sebor street.....          | Desplaines street.....          | Halsted street.....        | 282 96                |
| 5,862       | 3             | Crittenden street.....     | Noble street.....               | Wade street.....           | 99 32                 |
| 5,863       | 14            | Bissell street.....        | Center street.....              | Willow street.....         | 440 16                |
| 5,864       | 14            | West Ohio street.....      | Noble street.....               | Ashland avenue.....        | 440 16                |
| 5,897       | 3             | Lytle street.....          | West Taylor street.....         | Arthington street.....     | 99 32                 |
| 5,898       | 5             | Arthington street.....     | Center avenue.....              | Lytle street.....          | 157 20                |
| 5,899       | 7             | Plum street.....           | Loomis street.....              | Lafin street.....          | 230 08                |
| 5,900       | 8             | Idaho street.....          | West Van Buren street.....      | West Harrison street.....  | 251 52                |
| 5,907       | 2             | Thirty-second street.....  | Rhodes avenue.....              | Cottage Grove avenue.....  | 67 88                 |
| 5,908       | 3             | Orchard street.....        | Kemper place.....               | Fullerton avenue.....      | 99 32                 |
| 5,928       | 3             | Lytle street.....          | Gilpin place.....               | Arthington street.....     | 99 32                 |
| 5,929       | 8             | West Van Buren street..... | Campbell avenue.....            | Rockwell street.....       | 251 52                |
| 5,930       | 7             | Cicero court.....          | West Van Buren street.....      | West Harrison street.....  | 220 08                |
| 5,931       | 4             | South Dearborn street..... | Fifteenth street.....           | 400 feet south.....        | 125 76                |
| 5,977       | 3             | Oakwood avenue.....        | Ellis avenue.....               | Its eastern terminus.....  | 99 32                 |
| 5,985       | 32            | Dearborn street.....       | Jackson street.....             | Polk street.....           | 974 08                |
| 5,995       | 4             | Sibley street.....         | Arthington street.....          | West Taylor street.....    | 125 76                |
| 6,070       | 6             | Whiting street.....        | North Wells street.....         | Western terminus.....      | 188 64                |
| 6,074       | 3             | Kemper place.....          | Orchard street.....             | Eastern terminus.....      | 99 32                 |
| 6,075       | 14            | West Superior street.....  | Noble street.....               | Ashland avenue.....        | 440 16                |
| 6,095       | 14            | Warren avenue.....         | Ogden avenue.....               | Leavitt street.....        | 440 16                |
| 6,096       | 2             | Hills street.....          | North Wells street.....         | North Franklin street..... | 67 88                 |
| 6,097       | 3             | Flornmond street.....      | North Wells street.....         | 350 feet west.....         | 99 32                 |
| 6,098       | 3             | West Polk street.....      | Winthrop place.....             | Lafin street.....          | 99 32                 |
| 6,099       | 3             | Vernon Park place.....     | Sibley street.....              | Loomis street.....         | 99 32                 |
| 6,100       | 10            | Lafin street.....          | West Harrison street.....       | West Polk street.....      | 314 40                |
| 6,343       | 7             | Leavitt street.....        | West Taylor street.....         | West Twelfth street.....   | 220 08                |
| 6,344       | 13            | Walnut street.....         | Ashland avenue.....             | Western avenue.....        | 377 28                |
| 6,346       | 10            | West Clybourn place.....   | North branch Chicago river..... | Ashland avenue.....        | 314 40                |

|       |    |                             |                             |                           |             |
|-------|----|-----------------------------|-----------------------------|---------------------------|-------------|
| 6,347 | 12 | May street .....            | Fulton street.....          | West Indiana street.....  | 377 28      |
| 6,348 | 7  | West Fourteenth street..... | Stewart avenue.....         | Blue Island avenue.....   | 220 08      |
| 6,349 | 10 | West Van Buren street.....  | Halsted street.....         | Loomis street.....        | 314 40      |
| 6,363 | 11 | Augusta street.....         | Milwaukee avenue.....       | Elston avenue.....        | 345 84      |
| 6,364 | 9  | Paulina street.....         | Paulina street.....         | Wood street.....          | 282 96      |
| 6,365 | 9  | Aberdeen street.....        | West Harrison street.....   | West Polk street.....     | 282 96      |
| 6,366 | 8  | Union street.....           | West Fourteenth street..... | Meagher street.....       | 251 52      |
| 6,367 | 20 | Milwaukee avenue.....       | Union street.....           | West Division street..... | 628 80      |
| 6,387 | 7  | Scott street.....           | Astor street.....           | Lake Shore Drive.....     | 220 08      |
| 6,388 | 8  | West Huron street.....      | Milwaukee avenue.....       | Ashland avenue.....       | 251 52      |
| 6,389 | 23 | Ashland avenue.....         | North avenue.....           | West Clybourn place.....  | 723 12      |
| 6,390 | 6  | Dearborn street.....        | Madison street.....         | Randolph street.....      | 188 64      |
| 6,391 | 8  | Paulina street.....         | West Division street.....   | Milwaukee avenue.....     | 251 52      |
| 6,393 | 8  | Goethe street.....          | Astor street.....           | Lake Shore Drive.....     | 251 52      |
| 6,395 | 3  | Astor street.....           | Banks street.....           | Schiller street.....      | 99 32       |
|       |    |                             |                             |                           | \$34,432 81 |



## STATEMENT OF ASSESSMENTS FOR ERECTING OIL LAMP POSTS.

| Warrant No. | No. of Posts. | NAME OF STREET.             | FROM                     | TO                        | AMOUNT OF ASSESSMENT. |
|-------------|---------------|-----------------------------|--------------------------|---------------------------|-----------------------|
| 6,061       | 29            | Western avenue.....         | West Chicago avenue..... | West Division street..... | \$288 55              |
| 6,062       | 29            | West Chicago avenue.....    | Western avenue.....      | California avenue.....    | 288 55                |
| 6,063       | 40            | West Chicago avenue.....    | Wood street.....         | Western avenue.....       | 378 00                |
| 6,064       | 14            | Portland avenue.....        | Thirty-first street..... | Thirty-third street.....  | 167 80                |
| 6,065       | 13            | Fifth avenue.....           | Thirty-first street..... | Thirty-third street.....  | 155 35                |
| 6,066       | 52            | Emerald avenue.....         | Thirty-first street..... | Egan avenue.....          | 491 40                |
| 6,067       | 26            | Jones street.....           | Archer avenue.....       | Douglas avenue.....       | 271 70                |
| 6,068       | 4             | Trustee street.....         | West Kinzie street.....  | Austin avenue.....        | 51 80                 |
| 6,069       | 54            | West Thirteenth street..... | Ogden avenue.....        | Ashland avenue.....       | 510 30                |
| 6,071       | 7             | Holt street.....            | West Chicago avenue..... | Cornell street.....       | 90 65                 |
| 6,072       | 7             | Rose street.....            | West Chicago avenue..... | Cornell street.....       | 90 65                 |
| 6,073       | 13            | Lewis street.....           | Clybourn avenue.....     | Webster avenue.....       | 108 35                |
| 6,076       | 9             | Kramer street.....          | Jefferson street.....    | Halsted street.....       | 116 55                |
| 6,077       | 41            | West Madison street.....    | California avenue.....   | Homan avenue.....         | 387 45                |
| 6,078       | 18            | Colorado avenue.....        | California avenue.....   | Albany avenue.....        | 206 10                |
| 6,341       | 4             | Elizabeth street.....       | Carroll avenue.....      | West Kinzie street.....   | 46 80                 |
| 6,342       | 11            | West Fifteenth street.....  | Jefferson street.....    | Halsted street.....       | 117 45                |
| 6,345       | 15            | Sheffield avenue.....       | Clybourn avenue.....     | Center street.....        | 157 25                |
| 6,350       | 4             | Penn street.....            | Division street.....     | Vedder street.....        | 46 80                 |
| 6,351       | 8             | Bonfield street.....        | Archer avenue.....       | Hickory street.....       | 87 60                 |
| 6,352       | 14            | Thirty-third street.....    | Wentworth avenue.....    | Stewart avenue.....       | 147 80                |
| 6,353       | 13            | Poplar avenue.....          | Thirty-first street..... | Stearns street.....       | 137 35                |
| 6,354       | 14            | Herndon street.....         | Clybourn avenue.....     | Belden avenue.....        | 147 30                |
| 6,355       | 12            | Ward street.....            | Clybourn avenue.....     | Fullerton avenue.....     | 127 40                |
| 6,356       | 23            | Parnell avenue.....         | Thirty-first street..... | Douglas avenue.....       | 286 85                |
| 6,357       | 8             | Hudson avenue.....          | Sigel street.....        | Blackhawk street.....     | 87 60                 |
| 6,358       | 7             | Washenaw avenue.....        | West Lake street.....    | Fulton street.....        | 77 65                 |
| 6,359       | 10            | Bismark court.....          | Noble street.....        | Eastern terminus.....     | 107 60                |
| 6,360       | 11            | Maplewood avenue.....       | West Lake street.....    | R. R. grounds.....        | 117 45                |
| 6,361       | 10            | Talman avenue.....          | West Lake street.....    | R. R. grounds.....        | 107 50                |



|       |     |                            |                           |                             |            |
|-------|-----|----------------------------|---------------------------|-----------------------------|------------|
| 6,362 | 7   | Fairfield avenue.....      | West Lake street.....     | Fulton street....           | 77 65      |
| 6,368 | 4   | Lutz place.....            | Town street.....          | Eastern terminus .....      | 46 80      |
| 6,369 | 4   | West Twentieth street..... | Jefferson street.....     | Blair street.....           | 46 80      |
| 6,370 | 5   | Blair street.....          | Canalport avenue.....     | West Twentieth street ..... | 57 75      |
| 6,371 | 15  | Robey street.....          | North avenue.....         | Bloomingtondale road.....   | 157 25     |
| 6,372 | 27  | Leavitt street.....        | West Division street..... | North avenue.....           | 276 65     |
| 6,373 | 7   | West Blackhawk street..... | Ashland avenue.....       | Paulina street .....        | 77 65      |
| 6,374 | 4   | Dean street.....           | Paulina street.....       | Brigham street.....         | 46 80      |
| 6,375 | 43  | Dickson street.....        | West Division street..... | Bloomingtondale road.....   | 425 90     |
| 6,376 | 16  | Washtenaw avenue.....      | Ogden avenue.....         | West Twelfth street.....    | 167 20     |
| 6,377 | 17  | Fairfield avenue.....      | Ogden avenue.....         | West Twelfth street.....    | 177 15     |
| 6,378 | 12  | West Huron street.....     | Lawndale avenue.....      | Avers avenue.....           | 127 40     |
| 6,379 | 14  | Artesian avenue.....       | West Kinzie street.....   | West Ohio street.....       | 147 30     |
| 6,380 | 13  | Gross parkway.....         | Western avenue.....       | Rockwell street.....        | 137 35     |
| 6,381 | 8   | Springfield avenue.....    | West Kinzie street.....   | West Indiana street.....    | 87 60      |
| 6,382 | 4   | West Indiana street.....   | Avers avenue.....         | Springfield street.....     | 46 80      |
| 6,383 | 7   | Albany avenue.....         | West Madison street.....  | Colorado avenue.....        | 77 65      |
| 6,384 | 5   | Gross terrace.....         | West Madison street.....  | Colorado street.....        | 57 75      |
| 6,385 | 22  | Oakley avenue.....         | Milwaukee avenue.....     | Hamburg street.....         | 226 90     |
| 6,386 | 4   | Grand avenue.....          | Western avenue.....       | Artesian avenue.....        | 46 80      |
| 6,394 | 4   | West Monroe street.....    | Colorado avenue.....      | Sacramento avenue.....      | 46 80      |
|       | 661 |                            |                           |                             | \$7,973 45 |

## STATEMENT OF ASSESSMENTS FOR STREET AND ALLEY OPENINGS AND WIDENINGS.

| Warrant No. | NAME OF STREET.                  | FROM                                     | TO  | AMOUNT OF ASSESSMENT. |
|-------------|----------------------------------|--|---|-----------------------|
| 5,652       | O Walnut street.....             | California avenue.....                   | Francisco street.....                             | \$6,805 00            |
| 5,653       | O Alley.....                     | So. line of Herrington's add.            | Sixteenth street.....                             | 16,590 80             |
| 5,654       | W Uhland street.....             | Through lots 98 & 116 to 124.            | Butterfield's addition to Chicago                 | 1,125 54              |
| 5,655       | O & W Alley.....                 | E. & W. alley bet. Chicago st. & Oak st. | Oak street.....                                   | 8,881 63              |
| 6,028       | O West Twenty-second street..    | Glover street.....                       | Ogden avenue.....                                 | 8,740 43              |
| 6,029       | O Alley.....                     | Center street.....                       | E. & W. alley in E. part blk 2 Sheffield's add. } | 4,555 67              |
| 6,080       | W Haynes court.....              | Archer avenue.....                       | to Chicago, midway bet. Larrabee & Howe sts. }    | 1,949 43              |
| 6,081       | O W. Quincy street.....          | Its western terminus.....                | Lyman street.....                                 | 80,841 40             |
| 6,082       | O Elias street.....              | Its southern terminus.....               | Lyman street.....                                 | 4,938 74              |
| 6,083       | W Owasco street.....             | California avenue.....                   | Washtenaw avenue.....                             | 2,989 50              |
| 6,299       | O Alley.....                     | Lake avenue.....                         | Ellis avenue.....                                 | 5,181 80              |
| 6,300       | O Alley.....                     | South line Davis' add W. Lake street..   | Bet. Western & Artesian avenues                   | 1,234 00              |
| 6,301       | O & W Thirty-seventh street..... | Lot 8 Brown's sub'n, sec. 34..           | Grand Boulevard.....                              | 41,200 00             |
|             |                                  |  |   | \$128,968 47          |

## SUMMARY.

Total assessments for wooden  
block pavement, including  
curbing and filling :

|                     |              |                |
|---------------------|--------------|----------------|
| North Division..... | \$394,421 08 |                |
| South Division..... | 319,352 72   |                |
| West Division.....  | 1,223,201 98 |                |
|                     | <hr/>        | \$1,936,975 78 |

Total assessments for miscellane-  
ous street and alley improve-  
ments:

|                     |            |            |
|---------------------|------------|------------|
| North Division..... | 50,593 32  |            |
| South Division..... | 283,173 01 |            |
| West Division.....  | 105,935 95 |            |
|                     | <hr/>      | 439,702 28 |

Total assessments for laying pri-  
vate drains:

|                      |           |           |
|----------------------|-----------|-----------|
| North Division... .. | 16,803 00 |           |
| South Division.....  | 33,785 50 |           |
| West Division.....   | 34,972 73 |           |
|                      | <hr/>     | 85,561 23 |

Total assessments for laying  
water service pipes:

|                     |           |            |
|---------------------|-----------|------------|
| North Division..... | 19,566 45 |            |
| South Division..... | 38,573 90 |            |
| West Division.....  | 56,147 10 |            |
|                     | <hr/>     | 114,287 45 |

Total assessments for street and  
alley openings and widenings:

|                     |           |            |
|---------------------|-----------|------------|
| North Division..... | 14,572 83 |            |
| South Division..... | 68,915 26 |            |
| West Division.....  | 45,480 38 |            |
|                     | <hr/>     | 128,968 47 |

Total assessments for construct-  
ing plank sidewalks:

|                     |           |            |
|---------------------|-----------|------------|
| North Division..... | 5,691 61  |            |
| South Division....  | 32,739 87 |            |
| West Division.....  | 85,805 97 |            |
|                     | <hr/>     | 124,237 45 |

Carried forward..... \$1,831,632 66



|   |            |                       |
|---|------------|-----------------------|
| Brought forward.....                                  |            | \$1,831,632 66        |
| Total assessments for the erection of gas lamp posts: |            |                       |
| North Division.....                                   | \$4,949 64 |                       |
| South Division.....                                   | 4,474 12   |                       |
| West Division .....                                   | 25,009 05  |                       |
|   |            | <u>34,432 81</u>      |
| Total assessments for the erection of oil lamp posts: |            |                       |
| North Division.....                                   | 654 10     |                       |
| South Division.....                                   | 1,694 85   |                       |
| West Division....                                     | 5,623 50   |                       |
|   |            | <u>7,972 45</u>       |
| Total assessments for stone sidewalks:                |            |                       |
| South Division.....                                   | 17,406 88  |                       |
|   |            | <u>17,406 88</u>      |
| Grand total .....                                     |            | <u>\$2,889,544 80</u> |

The following list shows the total of assessments made in each year since 1861:

|  |              |
|--|--------------|
| For the year ending April 1, 1862.....     | \$ 42,635 49 |
| For the year ending April 1, 1863.....     | 46,493 67    |
| For the year ending April 1, 1864.....     | 389,169 31   |
| For the year ending April 1, 1865.....     | 103,576 35   |
| For the year ending April 1, 1866.....     | 802,574 56   |
| For the year ending April 1, 1867.....     | 317,206 18   |
| For the year ending April 1, 1868.....     | 1,354,436 48 |
| For the year ending April 1, 1869.....     | 2,395,683 03 |
| For the year ending April 1, 1870.....     | 2,836,852 48 |
| For the year ending April 1, 1871.....     | 2,359,835 89 |
| For the year ending April 1, 1872.....     | 62,222 25    |
| For the year ending April 1, 1873.....     |              |
| For the year ending April 1, 1874.....     | 749,460 27   |
| For the year ending April 1, 1875.....     | 723,254 42   |
| For the nine months ending January 1, 1876 | 60,585 72    |
| For the year ending January 1, 1877.....   | 1,516,081 07 |
| For the year ending January 1, 1878.....   | 124,498 48   |
| For the year ending January 1, 1879.....   | 284,900 45   |
| For the year ending January 1, 1880.....   | 588,963 44   |
| For the year ending January 1, 1881.....   | 980,895 50   |
| For the year ending January 1, 1882.....   | 1,227,169 71 |
| For the year ending January 1, 1883.....   | 1,395,372 98 |
| For the year ending January 1, 1884.....   | 2,232,757 04 |
| For the year ending January 1, 1885.....   | 2,857,905 28 |
| For the year ending January 1, 1886.....   | 2,889,544 80 |

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Total for twenty-five years..... \$26,362,074 84

Respectfully submitted,

H. J. JONES,

*Superintendent Special Assessments.*





## BUREAU OF MAPS.

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CHICAGO, January 1, 1886.

DEWITT C. CREGIER,

*Commissioner of Public Works:*

DEAR SIR: I herewith respectfully submit the Annual Report of the Bureau of Maps, for the year ending December 31, 1885.

During last year 162 new subdivisions have been recorded, and carefully entered into the different atlases of this bureau.

The following ordinances, to the number of 41, relating to opening, widening, extending, or vacating of streets and alleys, or parts thereof, have been passed by the City Council and duly noted in the atlases:

### OPENING, WIDENING AND EXTENSIONS.

Opening of Lewis street through N. E.  $\frac{1}{4}$  of block 12 of Sheffield's addition to Chicago. Ordinance passed February 24.

Opening and extending String street from its southern terminus to West Twenty-first street. Ordinance passed March 9.

Opening of West Seventeenth street through W.  $\frac{1}{2}$  block 3, in Assessor's division of N.  $\frac{1}{4}$  of S. E.  $\frac{1}{4}$  section 20, 39, 14. Ordinance passed March 9.

Opening of Idaho street from West Taylor street south to alley in block 11, of Morris and others' subdivision of W.  $\frac{1}{2}$  S. W.  $\frac{1}{4}$  section 18, 39, 14. Ordinance passed March 16.

Opening of an alley between Western avenue and Idaho street from West Taylor street north. Ordinance passed March 16.

Opening of an alley between Idaho street and Oakley avenue from West Taylor street north. Ordinance passed March 16.

Opening and widening of an alley from Twenty-sixth to Twenty-ninth street between Calumet avenue and South Park avenue. Ordinance passed March 20.

Opening of an alley in block 4 of Duncan's addition. Ordinance passed April 13.

Opening of West Adams street from Sacramento avenue to Kedzie avenue. Ordinance passed April 13.

Opening of an alley from West Jackson street to West Van Buren street, between Campbell avenue and Western avenue. Ordinance passed May 4.

Opening of Henry street from its present eastern terminus to the intersection of Morgan and Wright streets. Ordinance passed May 18.

Opening of West Twentieth street from Throop street to Centre avenue. Ordinance passed May 25.

Opening and widening of Irving avenue from West Adams street to West Jackson street. Ordinance passed July 27.

Opening of Asylum place from the North Branch of Chicago river to Chicago & North-Western Railway, and extending the same to Elston avenue. Ordinance passed July 30.

Opening and widening of Haines court between Lyman and Thirty-first streets. Ordinance passed September 14.

Opening of Bonney avenue from West Sixteenth street to Ogden avenue. Ordinance passed November 9.

Opening of an alley in block 19 of Johnston, Roberts & Storrs' addition to Chicago. Ordinance passed December 9.



Opening of Thirty-sixth street from Cottage Grove avenue to Lake avenue. Ordinance passed December 21.

Widening of West North avenue from Rockwell street to Fairfield avenue. Ordinance passed March 30.

• Widening Desplaines street from West Harrison street to West Polk street. Ordinance passed June 15.

### REPEALING ORDINANCES.

Opening of West Twentieth street from Throop street to Center avenue. (Ordinance passed August 6, 1883.) Repealing ordinance passed January 19.

Opening of North Hoyne avenue from West North avenue to Milwaukee avenue. (Ordinance passed May 15, 1882.) Repealing ordinance passed March 9.

Opening and widening the alley from Twenty-ninth to Thirtieth streets, between Indiana and Prairie avenues. (Ordinance passed November 13, 1882.) Repealing ordinance passed June 15.

Opening of an alley from Wentworth avenue to La Salle street, between Spring street and Twenty-seventh street. (Ordinance passed March 3, 1884.) Repealing ordinance passed July 13.

Opening of West Adams street from Sacramento avenue to Kedzie avenue. (Ordinance passed April 13, 1885.) Repealing ordinance passed Sept. 14.

Widening Irving avenue, between Adams and Jackson streets. (Ordinance passed July 27, 1885.) Repealing ordinance passed September 21.

Straightening the E. line of Astor street from Banks street to Schiller street. (Ordinance passed September 11, 1882.) Repealing ordinance passed April 13.

#### VACATIONS.

Vacation of certain alleys in blocks 12 and 13, Ashland addition to Chicago. Ordinance passed Feb. 9.

Vacation of alley in block 4, of Assessor's Division of N. W.  $\frac{1}{4}$  and W.  $\frac{1}{2}$  N. E.  $\frac{1}{4}$  Sec. 32, 39, 14. Ordinance passed April 2.

Vacation of side alley in sub-block 2 of block 40, C. T. subdivision of part of Sec. 21, 39, 14. Ordinance passed June 22.

Vacation of alley in block 16, of Lee and others' subdivision of S. W.  $\frac{1}{4}$  Sec. 12, 39, 13. Ordinance passed April 20.

Vacation of Snyder street, between Ogden avenue and Ashland avenue. Ordinance passed May 25.

Vacation of alley west and adjoining sub-lot 1, of part of lots 12 and 13, North addition to Chicago. Ordinance passed August 10.

Vacation of alley from Wabash avenue to Michigan avenue, between Thirty-sixth and Eda streets. Ordinance passed September 14.

Vacation of alley in block 9, of Vernon Park addition. Ordinance passed December 7.

Vacation of alley in block 10, of Pierce's addition to Holstein. Ordinance passed December 7.

### STREET NAMING.

#### NEW NAMES.

Alley running between Alaska street and North avenue and east of Town court, to be named "Lutz place." Ordinance passed March 30.

Street running east and west from Fairfield avenue to California avenue, in south part block 2, of Cook & Anderson's subdivision of part of Sec. 24, 39, 13, to be named "Douglas Park place." Ordinance passed May 30.

#### CHANGING NAMES.

Lafayette place, running east and west from North Clark street to Dearborn avenue, to be called "Walton place." Ordinance passed April 13.

Gano street, running east and west from Prairie avenue to South Park avenue, to be called "Thirtieth street." Ordinance passed April 27.



Genesee avenue, to be called "Lawndale avenue."  
Ordinance passed May 4.

### DEDICATIONS AND TRANSFERS:

Dedication of lot 50, in block 6, of Flournoy's re-subdivision of Jones and Patrick's addition "to Chicago, to be forever used as a public street." Recorded February 9, Book 1,567, page 566.

Dedication of part of lot 10, in block 80 in Elston's addition to Chicago, "for public alley." Recorded April 15, Doc. No. 616,719.

Transfer of the control of North Park avenue from North Clark street to Fullerton avenue to the Lincoln Park Commissioners. Ordinance passed August 10. Transfer accepted November 9.

Transfer of the control of Union and Jefferson parks to West Chicago Park Commissioners. Ordinance passed October 9. Transfer accepted Oct. 12.

Transfer of the control of Vernon park to the West Chicago Park Commissioners. Ordinance passed October 12. Transfer accepted November 9.

Transfer of the control of Wicker Park to the West Chicago Park Commissioners. Ordinance passed October 26. Transfer accepted November 9.

Transfer of the control of North avenue from North Clark street to Lake Shore drive to the Lincoln Park Commissioners. Ordinance passed December 28.

### HOUSE NUMBERS.

During this year about 4,500 house numbers have been assigned to new buildings and to old buildings removed to other localities; also about 2,500 wrong numbers have been corrected.

In the existing house number atlas, prepared after the fire, the street numbers in some cases have been arranged without any system. I find, for instance, on one street, and even in one and the same block, a number assigned to a frontage of 20 feet, 22 feet, 25 feet, and sometimes to 30 feet and over. In such cases we were forced to assign half numbers to some buildings. To correct the existing errors by a systematical re-assignment of numbers on such streets would necessitate a change of numbers for the entire length, which practically amounts to a renumbering of the whole street.

As stated in my Annual Report dated January 1, 1884, the house-number atlases of this bureau are in a bad condition, and are fast giving out, and will have to be replaced in the near future by a new set. Should the City Council order a re-naming and re-numbering of the streets, as suggested by the Postmaster

of this city in a communication to the City Council on June 8, 1885, a new set of books could be provided in time to inaugurate the new system of naming and numbering streets by the first of May, 1887. In the mean time the old books will be repaired and mended.

The following numbers of plats, tracings, drawings, etc., for the use of the different bureaus have been prepared during the last year:

*For Bureau of Special Assessments:*

- 293 sidewalk maps.
- 195 maps for street improvement.
- 1,140 plats for lamp-posts.
- 74 plats for street openings and widenings.
- 14 plats for vacating streets or alleys.

*For Bureau of Streets:*

- 37 survey maps.
- 304 plats for engineers' estimates.

*For the Law Department:*

- 22 plats.

*For Miscellaneous Purposes:*

- 48 plats.

Respectfully submitted,

FRANCIS A. DEMMLER,

*Superintendent of Maps.*





# BOOK-KEEPER'S STATEMENT

FOR 1885.

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CHICAGO, December 31, 1885.

D. C. CREGIER, Esq.,

*Commissioner of Public Works.*

DEAR SIR: I herewith respectfully submit my report of the receipts and expenditures of your department from January 1 to December 31, 1885.

## WATER FUND.

### RECEIPTS.

#### *Acc't Current Rents:*

|                      |              |                |
|----------------------|--------------|----------------|
| Amount collected     |              |                |
| during the year      |              |                |
| for current rents    |              |                |
| assessed.....        | \$883,037 09 |                |
| Current rents, meter |              |                |
| measurement....      | 455,862 29   |                |
|                      |              | \$1,338,899 38 |

#### *Acc't Water Service Cocks:*

|                  |             |                |
|------------------|-------------|----------------|
| Amount received  |             |                |
| for tapping per- |             |                |
| mits.....        | \$25,249 72 |                |
| Carried for'd,   | \$25,249 72 | \$1,338,899 38 |

|                             |             |                |
|-----------------------------|-------------|----------------|
| Brought forward,            | \$25,249 72 | \$1,338,899 38 |
| Amount received             |             |                |
| for plumbers' licenses..... | 207 00      |                |
| Amount received             |             |                |
| for brass sold....          | 19 20       |                |
|                             | <hr/>       | \$25,475 92    |

*Acc't Meter Department:*

|   |             |             |
|---|-------------|-------------|
| Amount received   |             |             |
| for labor and material for laying and repairing water pipes for elevator and general supply of water; also for changing location of hydrants and stop-cocks.. | \$23,642 99 |             |
| Amount received   |             |             |
| for meters, meter fittings and labor  | 12,483 73   |             |
| Amount received   |             |             |
| for repairing meters .....  | 3,991 90    |             |
|   | <hr/>       | \$40,118 62 |

*Acc't Water Pipe Extension :*

|  |            |                      |
|--|------------|----------------------|
| Amount received                                |            |                      |
| for water pipe and special castings sold... .. | \$1,307 24 |                      |
| Amount received                                |            |                      |
| for scrap iron sold                            | 2,403 13   |                      |
| Amount received                                |            |                      |
| for lumber sold..                              | 47 21      |                      |
|  | <hr/>      | \$3,757 58           |
| Carried forward,                               |            | <hr/> \$1,408,251 50 |



|  |                |                              |
|--|----------------|------------------------------|
| Brought forward,   | \$1,408,251 50 |                              |
| <i>Miscellaneous Receipts:</i>   |                |                              |
| Amount received<br>from City Comp-<br>troller for delin-<br>quent water taxes<br>and tax redemp-<br>tions.....                 | \$138 80       |                              |
| Amount deposited<br>by private parties<br>as security for<br>loan of hydrant<br>wrenches.....                                  | 430 00         |                              |
| Amount advanced<br>by private par-<br>ties to lay water<br>pipes.....  | 10,846 25      |                              |
| Amount received<br>for shut-off<br>charges .....   | 1,077 12       |                              |
| Amount received by<br>transfer from<br>other funds for<br>lead, bricks and<br>cement.....                                      | 50 92          |                              |
| Amount received<br>for labor and ma-<br>terial furnished by<br>North and West<br>Pumping Works<br>and Water Works<br>shop..... | 1,037 66       |                              |
|  | <hr/>          | \$13,580 75                  |
| Total receipts.  | <hr/>          | <u><u>\$1,421,832 25</u></u> |

## EXPENDITURES.

*Acc't Water Pipe Extension:*

## Paid for—

|  |              |
|--|--------------|
| Labor .....  | \$ 97,919 11 |
| Iron water pipe, .....                             | 108,601 43   |
| Special castings, .....                            | 14,612 85    |
| Composition and<br>sewer pipe....                  | 4,523 69     |
| Bricks .....                                       | 5,544 00     |
| Cement .....                                       | 2,132 50     |
| Lead .....   | 8,312 58     |
| Lumber .....                                       | 5,387 89     |
| Nails and general<br>hardware .....                | 251 30       |
| Pails and brooms .....                             | 22 75        |
| Paint and oil .....                                | 64 90        |
| Gasket and<br>packing .....                        | 475 54       |
| Sand .....   | 210 00       |
| Hose and coup-<br>lings .....                      | 7 33         |
| Lamps, wicking,<br>etc .....                       | 64 32        |
| Iron covers .....                                  | 6,418 97     |
| Plastering mate-<br>rial .....                     | 2,773 75     |
| Scrap iron .....                                   | 1,050 04     |
| Tools and repair-<br>ing .....                     | 394 64       |
| Damages. ....                                      | 147 35       |
| 1 horse .....                                      | 160 00       |
| 1 hoisting ma-<br>chine .....                      | 100 00       |
| Labor and mate-<br>rial from ma-<br>chine shop.... | 19,688 15    |

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Carried forward, \$278,863 09

|  |           |    |              |
|--|-----------|----|--------------|
| Brought forward, \$  | 278,863   | 09 |              |
| Teaming .....  | 5,175     | 65 |              |
| Plumbing .....   | 2,702     | 41 |              |
| Drilling rock ....   | 2,078     | 01 |              |
| Paving .....   | 1,815     | 90 |              |
| Blacksmithing ..   | 17        | 83 |              |
| Stabling horses..  | 307       | 85 |              |
| Use of horse and<br>buggy .....                                      | 201       | 65 |              |
| Books and sta-<br>tionery. ....                                      | 45        | 78 |              |
| Advertising .....  | 105       | 01 |              |
| Moving tele-<br>phone .....  | 45        | 60 |              |
|  | <hr/>     |    |              |
| Cash payments..  | \$291,358 | 78 |              |
| Deduct—  |           |    |              |
| For water pipe<br>furnished Me-<br>ter De part-<br>ment .....        | \$4,119   | 75 |              |
| For lumber fur-<br>nished for West<br>Pump'g Works<br>Extension. . . | 407       | 40 |              |
|  | <hr/>     |    |              |
|  | \$4,527   | 15 | \$286,831 63 |
| <i>Acct North Pumping Works:</i>                                     |           |    |              |
| Paid for—  |           |    |              |
| Salaries of Engi-<br>neers, Firemen,<br>Oilers and la-<br>bor .....  | \$30,170  | 05 |              |
| Coal .....   | 70,680    | 79 |              |
| Lumber .....   | 198       | 02 |              |
| Pails and brooms   | 13        | 63 |              |
| Cement .....   | 11        | 50 |              |
|  | <hr/>     |    |              |
| Carried forward, \$  | 101,073   | 99 | \$286,831 63 |



|  |              |              |
|--|--------------|--------------|
| Brought forward,                       | \$101,073 99 | \$286,831 63 |
| Belting . . . . .                      | 26 31        |              |
| Hose . . . . .                         | 5 00         |              |
| Castings . . . . .                     | 107 02       |              |
| Paint and oil . . .                    | 913 24       |              |
| Soap and tallow..                      | 28 75        |              |
| Fire brick, etc..                      | 25 00        |              |
| Gasket packing<br>and waste . . . . .  | 196 29       |              |
| Tools and hard-<br>ware . . . . .      | 179 93       |              |
| Steel and iron . . .                   | 61 36        |              |
| Lubricators and<br>grease cups . . . . | 91 30        |              |
| Composition and<br>sewer pipe . . . .  | 33 75        |              |
| Gas . . . . .                          | 962 37       |              |
| Trees and plants.                      | 40 00        |              |
| Earth filling . . . .                  | 34 25        |              |
| Repairing roof . . .                   | 43 60        |              |
| Paving . . . . .                       | 102 40       |              |
| Steam gauges<br>and glasses . . . .    | 23 00        |              |
| 1 pump . . . . .                       | 161 50       |              |
| 1 fire exting'her . .                  | 37 58        |              |
| Pipe and fittings . .                  | 93 87        |              |
| Repairing scales . .                   | 12 72        |              |
| Repairing tools . . .                  | 5 52         |              |
| Lamps . . . . .                        | 13 40        |              |
| Use of telephone . .                   | 12 77        |              |
| Repairing boilers . .                  | 431 89       |              |
| Sprinkling . . . . .                   | 48 00        |              |
| Use of tug . . . . .                   | 60 00        |              |
| Teaming . . . . .                      | 582 05       |              |
| Stabling horses . . .                  | 542 50       |              |
| Advertising . . . . .                  | 62 55        |              |
| Small stoves . . . .                   | 51 69        |              |
|  |              | <hr/>        |
|  |              | \$106,063 60 |
| Carried forward,                       |              | <hr/>        |
|  |              | \$392,895 23 |

Brought forward, \$392,895 23

*Acc't North Pumping Works Extension:*

Paid for—

|                                   |         |         |
|-----------------------------------|---------|---------|
| Advertising.....                  | \$40 84 |         |
| Printing speci-<br>fications..... | 9 25    |         |
| Blue prints of<br>plans.....      | 10 00   |         |
| Cartage.....                      | 1 50    |         |
|                                   | <hr/>   | \$61 59 |

*Acc't West Pumping Works:*

Paid for—

|   |             |              |
|---|-------------|--------------|
| Salaries of Engi-<br>neers, Firemen,<br>Oilers and 'la-<br>bor..... | \$34,916 28 |              |
| Coal .....  | 48,229 63   |              |
| Other fuel.....   | 1,509 88    |              |
| Hardware .....  | 140 34      |              |
| Iron and machine<br>work.....                                       | 724 54      |              |
| Waste and pack-<br>ing.....   | 881 97      |              |
| Oil.....  | 2,294 85    |              |
| Soap, brooms, etc   | 42 55       |              |
| Grease.....   | 803 00      |              |
| Lime and ce-<br>ment.....   | 11 05       |              |
| Feed water coils  | 438 00      |              |
| Terra cotta.....  | 28 00       |              |
| Repairing boilers<br>and engines..                                  | 1,050 93    |              |
| Fire brick and<br>clay.....   | 275 00      |              |
| Lumber.....   | 16 09       |              |
|   | <hr/>       |              |
| Carried forward,  | \$91,362 11 | \$392,956 82 |

|                                |             |              |
|--------------------------------|-------------|--------------|
| Brought forward,               | \$91,362 11 | \$392,956 82 |
| Paint and alcohol.....         | 20 10       |              |
| Sewer pipe.....                | 29 00       |              |
| Castings.....                  | 810 53      |              |
| Valves.....                    | 1,502 20    |              |
| Sand.....                      | 5 00        |              |
| Tools and repairing.....       | 133 49      |              |
| Repairing scale..              | 18 94       |              |
| Lamps, oil cans, etc.....      | 4 80        |              |
| Cylinder cover..               | 16 50       |              |
| Roof for boiler house.....     | 750 00      |              |
| Leather.....                   | 11 90       |              |
| Fire extinguisher              | 37 50       |              |
| Mattresses.....                | 15 00       |              |
| Hose.....                      | 112 50      |              |
| Grinding bricks.               | 12 00       |              |
| Use of telephone               | 12 78       |              |
| Advertising ....               | 60 51       |              |
| Repairing roof..               | 37 56       |              |
| Teaming.....                   | 21 50       |              |
| Indicator cards..              | 5 33        |              |
| Express charges and freight... | 3 00        |              |
| Stabling horses..              | 177 45      |              |
| Thermometer...                 | 4 50        |              |
| Carriage hire...               | 10 00       |              |
| Ice.....                       | 28 40       |              |
| Special taxes....              | 615 73      |              |
|                                |             | \$95,817 97  |

*Acc't West Pumping Works Extension:*

Paid for—

|                  |            |              |
|------------------|------------|--------------|
| Testing engines. | \$2,228 02 |              |
| Labor.....       | 1,614 36   |              |
| Carried forward, | \$3,842 38 | \$488,774 79 |



|                                |            |              |
|--------------------------------|------------|--------------|
| Brought forward,               | \$3,842 38 | \$488,774 79 |
| 1 test pump .....              | 80 00      |              |
| Lumber.....                    | 1,016 65   |              |
| Balance on ma-<br>chinery..... | 28,611 25  |              |
|                                | <hr/>      | \$33,550 28  |

*Acc't Water Works Repairs:*

## Paid for—

|                               |             |
|-------------------------------|-------------|
| Labor.....                    | \$75,759 29 |
| Teaming.....                  | 8,119 84    |
| Lamps, wicks, etc             | 35 60       |
| Castings .....                | 6 60        |
| Damages.....                  | 36 50       |
| Lumber.....                   | 1,477 24    |
| Stone cutting...              | 24 75       |
| Hardware....                  | 337 52      |
| Paint and oil....             | 1 25        |
| Tools and repair-<br>ing..... | 198 42      |
| Sand.....                     | 85 00       |
| Paving.....                   | 1,753 09    |
| Blacksmithing...              | 8 30        |
| Tug service.....              | 96 00       |
| Man-hole covers               | 444 22      |
| Plumbing .....                | 4,894 17    |
| Pitch.....                    | 3 50        |
| Bricks.....                   | 1,355 80    |
| Cement.....                   | 1,042 40    |
| Sewer pipe.....               | 109 03      |
| Analyzing lake<br>water.....  | 150 00      |
| Royalty on hy-<br>drants..... | 15 00       |
| Stabling ex-<br>penses.....   | 395 44      |

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Carried forward,    \$96,348 96    \$522,325 07

|   |             |              |
|---|-------------|--------------|
| Brought forward,  | \$96,348 96 | \$522,325 07 |
| Books, printing<br>and stationery.                                | 43 00       |              |
| Advertising. ....   | 289 81      |              |
| Labor at shop...  | 932 00      |              |
| <hr/>   |             |              |
| Cash payments   | \$97,613 77 |              |
| Deduct—   |             |              |
| For lumber fur-<br>nished West<br>Pump'g Works<br>extension. .... | 609 25      |              |
| <hr/>   |             | \$97,004 52  |

*Acc't Meter Department;*

## Paid for—

|                                  |            |
|----------------------------------|------------|
| Meters.....                      | \$7,586 05 |
| Meter fittings...                | 2,210 76   |
| Labor.....                       | 12,524 24  |
| Water pipe and<br>castings ..... | 5,093 56   |
| Packing.....                     | 24 45      |
| Bricks.....                      | 1,046 00   |
| Cement .....                     | 405 68     |
| Lead .....                       | 551 95     |
| Sewer pipe.....                  | 66 25      |
| Lumber.....                      | 544 59     |
| Hardware.....                    | 53 02      |
| Tar and pitch....                | 11 00      |
| Saw dust.....                    | 34 50      |
| Sand.....                        | 80 00      |
| Paint and oil....                | 1 50       |
| Machine work...                  | 31 13      |
| Rebates.....                     | 4,920 57   |
| Teaming .....                    | 482 83     |
| Stabling and<br>horseshoeing..   | 852 55     |

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Carried forward,    \$36,520 63    \$619,329 59

|                                   |             |              |
|-----------------------------------|-------------|--------------|
| Brought forward,                  | \$36,520 63 | \$619,329 59 |
| Tools and repair-<br>ing.....     | 18 80       |              |
| Printing and sta-<br>tionery..... | 47 00       |              |
| Pails.....                        | 2 13        |              |
| 3 horses.....                     | 425 00      |              |
| Paving.....                       | 25 50       |              |
| Candles and<br>matches.....       | 18 76       |              |
| Labor at Water<br>Works shop...   | 1,676 00    |              |
| Refunded.....                     | 473 95      |              |
|                                   | <hr/>       | \$39,207 77  |

*Acc't Lake Tunnel Crib:*

## Paid for—

|                                |          |              |
|--------------------------------|----------|--------------|
| Labor.....                     | 2,499 49 |              |
| Boarding laborers              | 497 05   |              |
| Tug service.....               | 1,114 36 |              |
| Hardware.....                  | 38 98    |              |
| Repairing boat..               | 12 00    |              |
| Tools... ..                    | 19 36    |              |
| Paint and oil....              | 91 08    |              |
| Packing .....                  | 2 65     |              |
| Cement .....                   | 18 75    |              |
| Lumber .....                   | 38 74    |              |
| Labor at Water<br>Works Shop.. | 34 15    |              |
| Coal.....                      | 170 50   |              |
| Glass and putty..              | 18 19    |              |
| Grate bars.....                | 13 19    |              |
| Fire bricks.....               | 2 00     |              |
| Iron work.....                 | 76 49    |              |
| Repairing roof..               | 148 75   |              |
| Advertising .....              | 6 86     |              |
|                                | <hr/>    | \$ 4,802 59  |
| Carried forward,               |          | \$663,339 95 |



Brought forward, \$663,339 95

*Acc't Water Service Cocks:*

Paid for—

|                   |             |
|-------------------|-------------|
| Labor.....        | \$19,772 28 |
| Corporation taps. | 5,197 59    |
| Iron stop-cock    |             |
| boxes.....        | 3,979 05    |
| Advertising.....  | 72 71       |
| Books and sta-    |             |
| tionery .....     | 77 45       |
| Hardware .....    | 75 89       |
| Plumbing.....     | 15 89       |
| Paving.....       | 203 00      |
| 1 Pump.....       | 6 00        |
| Stabling horses.. | 1,330 88    |
| Labor at Water    |             |
| Works Shop...     | 202 86      |

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\$30,933 60

*Acc't Water Works Shop:*

Paid for—

|                   |             |
|-------------------|-------------|
| Labor .....       | \$13,476 93 |
| Hydrant castings  | 6,718 25    |
| Brass castings... | 5,335 95    |
| Coal .....        | 422 29      |
| Gasket and pack-  |             |
| ing .....         | 166 13      |
| Iron and steel... | 416 68      |
| Valves and fit-   |             |
| tings .....       | 486 34      |
| Iron work.....    | 91 75       |
| Hardware .....    | 452 91      |
| Paint and oil.... | 30 28       |
| Spur wheels.....  | 64 84       |
| Gas .....         | 79 53       |
| Solder .....      | 1 40        |
| Lead pipe.....    | 91 57       |

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Carried forward, \$27,834 85      \$694,273 55

|                     |                    |                   |
|---------------------|--------------------|-------------------|
| Brought forward,    | \$27,834 85        | \$694,273 55      |
| Lumber .....        | 304 41             |                   |
| Leather.....        | 68                 |                   |
| Tools and repair-   |                    |                   |
| ing .....           | 107 76             |                   |
| Felt... ..          | 2 50               |                   |
| Ice.....            | 6 40               |                   |
| Advertising.....    | 7 59               |                   |
| Cash payments.      | \$28,264 19        |                   |
| Deduct—             |                    |                   |
| For labor and ma-   |                    |                   |
| terial fur-         |                    |                   |
| nished for Ho-      |                    |                   |
| ter Depart-         |                    |                   |
| ment .....          | \$ 1,676 00        |                   |
| Water Pipe exten-   |                    |                   |
| sion .....          | 20,519 60          |                   |
| Stable account .    | 21 83              |                   |
| Water Works re-     |                    |                   |
| pairs .....         | 932 00             |                   |
| Lake Tunnel crib.   | 34 15              |                   |
| Water Service Cocks | 202 86             |                   |
|                     | <u>\$23,386 44</u> |                   |
|                     |                    | <u>\$4,877 75</u> |

*Acc't Water Works Stable:*

Paid for—

|                   |                   |                     |
|-------------------|-------------------|---------------------|
| Labor .....       | \$1,552 60        |                     |
| Horse feed.....   | 1,171 90          |                     |
| Blankets. ....    | 33 50             |                     |
| Repairing harness | 107 30            |                     |
| Horseshoeing ...  | 299 71            |                     |
| Wagons and re-    |                   |                     |
| pairing .....     | 581 06            |                     |
| Rubber boots...   | 4 28              |                     |
| Carried forward,  | <u>\$3,750 35</u> | <u>\$699,151 30</u> |

|   |            |              |
|---|------------|--------------|
| Brought forward,                            | \$3,750 35 | \$699,151 30 |
| Liniments, medical attendance,<br>etc ..... | 62 55      |              |
| Packing .....                               | 4 40       |              |
| Lime .....                                  | 1 30       |              |
| Lumber .....                                | 6 00       |              |
| Glass .....                                 | 2 50       |              |
| Labor at Water<br>Works Shop...             | 21 83      |              |
| Stone coping...                             | 24 25      |              |
| Repairing roof...                           | 45 40      |              |

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Cash payments. \$3,918 58

## Deduct—

|                             |          |              |
|-----------------------------|----------|--------------|
| Amount charged              |          |              |
| Water Dept..                | \$708 66 |              |
| Amount charged              |          |              |
| N. Pumping<br>Works.....    | 542 50   |              |
| Amount charged              |          |              |
| Water Works<br>Shop.....    | 391 05   |              |
| Amount charged              |          |              |
| Water Pipe extension .....  | 307 85   |              |
| Amount charged              |          |              |
| Water Works<br>Repairs..... | 395 44   |              |
| Amount charged              |          |              |
| West Pumping<br>Works.....  | 177 45   |              |
| Amount charged              |          |              |
| Water Service<br>Cocks..... | 1,330 88 |              |
|                             | <hr/>    | \$3,853 83   |
|                             |          | <hr/>        |
|                             |          | \$64 75      |
| Forward,                    |          | <hr/>        |
|                             |          | \$699,216 05 |



Brought forward, \$699,216 05

*Acc't Water Office Expense and Salaries:*

Paid for—

|   |            |
|---|------------|
| Blank books,<br>printing and<br>stationery..... | \$1,090 01 |
| Binding books<br>and papers....                 | 105 87     |
| Postage .....                                   | 280 09     |
| Car fare.....                                   | 1,789 78   |
| Hardware.....                                   | 57 46      |
| Matches and can-<br>dles .....                  | 33 82      |
| Picks and shovels                               | 6 04       |
| Advertising.....                                | 126 83     |
| Maps of Chicago.                                | 27 00      |
| Coin machine....                                | 8 00       |
| Eyelet machine..                                | 6 50       |
| Rubber stamps..                                 | 11 40      |
| Scales .....                                    | 6 00       |
| Coin bags .....                                 | 5 00       |
| City Directory..                                | 5 00       |

---

5 80

Salaries .....

105,705 72

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\$109,264 52

*Acc't Water Proportional Office  
Expenses and Salaries:*

Paid for—

|   |          |
|---|----------|
| Blank books,<br>printing and<br>stationery .... | \$689 05 |
| Maps and map-<br>rack.....                      | 71 95    |
| Window shades..                                 | 4 82     |

---

Carried forward, \$765 82 \$808,480 57

|   |          |              |
|---|----------|--------------|
| Brought forward,  | \$765 82 | \$808,480 57 |
| Leveling rod....  | 17 00    |              |
| Hardware .....  | 20 95    |              |
| Rubber stamps..   | 7 25     |              |
| Newspapers.....   | 20 38    |              |
| Wood cut.....   | 35 00    |              |
| Car fare.....   | 43 26    |              |
| Postage .....   | 25 80    |              |
| Printing books<br>and papers....  | 88 10    |              |
| Lithographing ..  | 72 33    |              |
| $\frac{1}{2}$ cost annual re-<br>port.....  | 299 02   |              |
| Oil.....  | 7 35     |              |
| $\frac{1}{2}$ salaries of Com-<br>missioner, City<br>Engineer, Sec-<br>retary, B o o k-<br>keeper, etc .... | 5,359 92 |              |
|   |          | \$6,762 18   |

*Miscellaneous Expenditures:*

## Paid—

|   |              |              |
|---|--------------|--------------|
| Interest on wa-<br>ter loan bonds.                                      | \$264,954 55 |              |
| Sundry per s o n s<br>for money ad-<br>vanced to lay<br>water pipes.... | 9,716 43     |              |
| Deposits for hy-<br>drant wrenches<br>refunded.....                     | 350 00       |              |
| Double payments<br>of water taxes<br>refunded .....                     | 264 64       |              |
| Carried forward,  | \$275,285 62 | \$815,242 75 |

|  |              |                             |
|--|--------------|-----------------------------|
| Brought forward,   | \$275,285 62 | \$815,242 75                |
| For bricks, cement and lead chargeable to other funds. ..    | 50 92        |                             |
| J. W. Lyons, cashier, for supply of fractional currency..... | 500 00       |                             |
|  | <hr/>        | \$275,836 54                |
| Total expenditures   |              | <hr/> <u>\$1,091,079 29</u> |

## SEWERAGE FUND.

## RECEIPTS.

|   |             |             |
|---|-------------|-------------|
| Amount received for drain permits.              | \$31,053 73 |             |
| Amount received for drain layers' licenses..... | 140 00      |             |
| Amount received for labor.....                  | 150 96      |             |
|   | <hr/>       | \$31,344 69 |
| Amount appropriated by City Council:            |             |             |
| For cleaning sewers, and catch-basins.          | \$36,000 00 |             |
| For raising catch-basins (intersections).....   | 35,000 00   |             |
| For sewerage sinking fund.....                  | 1,000 00    |             |
| For sewerage salaries.....                      | 17,220 00   |             |
|   | <hr/>       |             |
| Carried forward,                                | \$89,220 00 | \$31,344 69 |



|  |             |                    |
|--|-------------|--------------------|
| Brought forward,   | \$89,220 00 | \$31,344 69        |
| For other salaries<br>and expenses<br>payable from sewer<br>fund.....  | 6,193 33    |                    |
| For new sewers....   | 220,000 00  |                    |
| For refunding money<br>advanced.....   | 20,375 00   |                    |
| For deficiency in<br>collection of taxes   | 10,073 67   |                    |
|  | <hr/>       | \$345,862 00       |
| Amount received<br>from special as-<br>sessment fund for<br>constructing<br>catch-basins ....                  | \$12,050 00 |                    |
| Amount received<br>from sundry per-<br>sons for con-<br>structing catc h-<br>basins.....                       | 41 60       |                    |
|  | <hr/>       | \$12,091 60        |
| Amount advanced<br>by sundry persons<br>for constructing<br>sewers.....  |             | 8,984 00           |
| Amount received<br>from sundry per-<br>sons for repairing<br>sewers and catch-<br>basins.....                  |             | 680 88             |
| Amount received<br>from village of<br>Jefferson on ac-<br>count of con-<br>structing West-<br>ern avenue sewer |             | 1,000 00           |
| Carried forward,   | <hr/>       | <hr/> \$399,963 17 |

|   |              |                     |
|---|--------------|---------------------|
| Brought forward,                        | \$399,963 17 |                     |
| Amount received<br>from sundry persons: |              |                     |
| For sewer pipe . . . .                  | \$190 49     |                     |
| For wooden covers,                      | 43 49        |                     |
| For iron covers . . .                   | 616 02       |                     |
| For sewer bricks . .                    | 37 05        |                     |
| For labor . . . . .                     | 148 55       |                     |
|   |              | <u>\$1,035 60</u>   |
| Total receipts . . .                    |              | <u>\$400,998 77</u> |

## EXPENDITURES.

*Acc't Sewers North Division:*

## Paid for—

|                                     |            |
|-------------------------------------|------------|
| Labor . . . . .                     | \$2,114 74 |
| Sewer pipe . . . . .                | 506 98     |
| Sewer bricks . . . .                | 703 93     |
| Wooden covers..                     | 340 22     |
| Iron covers . . . . .               | 143 66     |
| Cement . . . . .                    | 267 59     |
| Sand . . . . .                      | 48 00      |
| Catch-basins . . . .                | 1,604 93   |
| Teaming . . . . .                   | 252 19     |
| Contractors. . . . .                | 8,194 93   |
| Car fare and post-<br>age . . . . . | 25 00      |
| Advertising . . . . .               | 29 68      |
| Books, printing<br>and stationery.  | 24 20      |

|                 |             |
|-----------------|-------------|
| Cash payments.. | \$14,255 99 |
|-----------------|-------------|

## Deduct—

|   |        |
|---|--------|
| Amount charged<br>house drains<br>for setting<br>junctions. . . . . | 200 00 |
|---|--------|

|  |                    |
|--|--------------------|
|  | <u>\$14,055 99</u> |
|--|--------------------|

|                  |             |
|------------------|-------------|
| Carried forward, | \$14,055 99 |
|------------------|-------------|

|  |             |             |
|--|-------------|-------------|
| Brought forward,   |             | \$14,055 99 |
| <i>Acc't Sewers South Division:</i>                              |             |             |
| Paid for—  |             |             |
| Labor.....   | \$4,844 05  |             |
| Constructing-<br>sewers (con-<br>tractors).....                  | 41,710 88   |             |
| Earth filling.....   | 68 00       |             |
| Teaming.....   | 490 24      |             |
| Iron pipes and<br>castings.....                                  | 134 54      |             |
| Sewer pipe.....  | 876 75      |             |
| Sewer bricks.....  | 1,401 29    |             |
| Wooden covers..  | 910 25      |             |
| Iron covers.....   | 300 40      |             |
| Cement.....  | 493 08      |             |
| Sand.....  | 95 00       |             |
| Catch-basins ....  | 2,105 99    |             |
| Plumbing .....   | 470 61      |             |
| Oil.....   | 7 65        |             |
| Advertising.....   | 20 27       |             |
| Books, printing<br>and stationery.                               | 9 25        |             |
| Car fare and post-<br>age.....                                   | 50 00       |             |
| Cash payments....  | \$53,918 25 |             |
| Deduct—  |             |             |
| Amount charged<br>house drains<br>for setting<br>junctions ..... | 1,271 00    |             |
|  |             | \$52,647 25 |
| <i>Acc't Sewers West Division:</i>                               |             |             |
| Paid for—  |             |             |
| Labor.....   | \$7,547 79  |             |
| Carried forward,   | \$7,547 79  | \$66,703 24 |

|   |              |               |
|---|--------------|---------------|
| Brought forward,  | \$7,547 79   | \$66,703 24   |
| Constructing<br>sewers (con-<br>tractors).....                  | 111,381 30   |               |
| Plumbing.....   | 1,614 49     |               |
| Oil.....  | 7 80         |               |
| Blacksmithing...  | 36 49        |               |
| Rubber boots....  | 19 00        |               |
| Hardware.....   | 6 68         |               |
| Iron pipe and<br>castings... ..                                 | 134 54       |               |
| Sewer pipe.....   | 2,184 77     |               |
| Sewer bricks....  | 3,846 45     |               |
| Wooden covers..   | 3,471 72     |               |
| Iron covers.....  | 68 00        |               |
| Cement .....  | 1,577 87     |               |
| Sand.....   | 142 00       |               |
| Catch-basins....  | 7,038 64     |               |
| Teaming .....   | 922 40       |               |
| Advertising.....  | 61 35        |               |
| Books, printing<br>and stationery..                             | 25 65        |               |
| Car fare and post-<br>age.....                                  | 75 00        |               |
| Cash payments..   | \$140,161 94 |               |
| Deduct—   |              |               |
| Amount charged<br>house drains<br>for setting<br>junctions..... | 3,020 85     |               |
|   |              | \$ 137,141 09 |
| <i>Acc't House Drains:</i>                                      |              |               |
| Paid for—   |              |               |
| Labor.....  | \$ 17,562 31 |               |
| Hardware.....   | 13 73        |               |
| Plumbing.....   | 18 00        |               |
| Carried forward,  | \$17,594 04  | \$203,844 33  |



|                                    |             |                    |
|------------------------------------|-------------|--------------------|
| Brought forward,                   | \$17,594 04 | \$203,844 33       |
| Sewer pipe.....                    | 75 57       |                    |
| Sewer bricks....                   | 18 43       |                    |
| Iron covers.....                   | 7 20        |                    |
| Cement.....                        | 18 34       |                    |
| Teaming.....                       | 54 95       |                    |
| Setting junctions                  | 4,491 85    |                    |
| Rubber boots...                    | 5 00        |                    |
| Speaking tubes..                   | 25 00       |                    |
| Depreciation of<br>stock.....      | 10 00       |                    |
| Books, printing<br>and stationery. | 136 01      |                    |
| Binding atlas....                  | 28 00       |                    |
| Advertising.....                   | 64 06       |                    |
| Carfare and post-<br>age.....      | 221 97      |                    |
|                                    |             | <u>\$22,750 42</u> |

*Acc't Cleaning Sewers and Catch-basins:*

Paid for--

|                                    |             |                     |
|------------------------------------|-------------|---------------------|
| Labor.....                         | \$40,926 54 |                     |
| Teaming.....                       | 5,115 05    |                     |
| Rubber boots....                   | 18 75       |                     |
| Candles.....                       | 28 00       |                     |
| Salt.....                          | 1 00        |                     |
| Lumber .....                       | 16 41       |                     |
| Hardware.....                      | 1 95        |                     |
| Oil .....                          | 8 65        |                     |
| Tools and repair-<br>ing.....      | 72 30       |                     |
| Repairing flush-<br>ing wagon..... | 48 20       |                     |
| Depreciation of<br>stock.....      | 295 33      |                     |
|                                    |             | <u>\$46,532 18</u>  |
| Carried forward,                   |             | <u>\$273,126 93</u> |

Brought forward, \$273,126 93  
*Acc't Repairing Sewers and Catch-*  
*basins:*

Paid for—

|                               |            |
|-------------------------------|------------|
| Labor.....                    | \$5,188 69 |
| Teaming.....                  | 781 40     |
| Sewer pipe.....               | 256 72     |
| Sewer bricks....              | 620 46     |
| Wooden covers..               | 1,501 00   |
| Iron covers.....              | 423 81     |
| Cement.....                   | 341 89     |
| Sand.....                     | 20 00      |
| Repairing tools..             | 59 61      |
| Blacksmithing..               | 11 29      |
| Paving.....                   | 312 48     |
| Depreciation of<br>stock..... | 55 50      |

\$9,567 85

*Acc't Intersections:*

Paid for—

|                               |             |
|-------------------------------|-------------|
| Labor.....                    | \$12,618 88 |
| Paving.....                   | 11 33       |
| Sewer pipe.....               | 296 37      |
| Sewer bricks....              | 5,693 41    |
| Wooden covers..               | 3,316 45    |
| Iron covers.....              | 9,454 50    |
| Cement.....                   | 2,722 33    |
| Sand.....                     | 200 00      |
| Teaming.....                  | 1,254 40    |
| Depreciation of<br>stock..... | 197 50      |

\$35,765 17

*Acc't Sewerage Proportional Office*  
*Expenses and Salaries:*

Paid for—

|                  |          |
|------------------|----------|
| Lithographing... | \$217 33 |
|------------------|----------|

|                  |          |              |
|------------------|----------|--------------|
| Carried forward, | \$217 33 | \$318,459 95 |
|------------------|----------|--------------|

|   |             |                     |
|---|-------------|---------------------|
| Brought forward,  | \$217 83    | \$318,459 95.       |
| Books, printing<br>and stationery..   | 297 48      |                     |
| Newspapers.....   | 16 63       |                     |
| Postage.....  | 37 69       |                     |
| Car fare.....   | 28 00       |                     |
| One-third cost<br>printing annual<br>report .....   | 299 02      |                     |
| One-third salaries<br>of commissioner,<br>city engineer,<br>secretary, book-<br>keeper, etc ...         | 5,359 92    |                     |
|   |             | \$6,256 07          |
| <i>Miscellaneous Expenditures:</i>  |             |                     |
| Paid—   |             |                     |
| Sewerage salaries.  | \$17,140 00 |                     |
| Sewerage sinking<br>fund.....   | 500 00      |                     |
| River improve-<br>ment sinking<br>fund.....   | 500 00      |                     |
| For material on<br>hand.....  | 6,031 36    |                     |
| For labor and ma-<br>terial used in<br>constructing<br>catch-basins<br>under special<br>assessm'ts, etc | 12,091 60   |                     |
| Sundry parties<br>refunding mon-<br>ey advanced for<br>constructing<br>sewers.....                      | 21,264 18   |                     |
|   |             | \$57,527 14         |
| Total expenditures.....   |             | <u>\$382,243 16</u> |

## APPROPRIATION FUND.

## RECEIPTS.

*Acc't Improved Streets:*

Amount appropriated by city council. .... \$100,000 00

## Received for—

Paving and inspection ..... 6,792 91

Use of steam roller..... 4,582 00

One tar kettle sold ..... 50 00

Using street..... 18 00

Removing obstructions..... 21 00

Labor and material furnished fire department 245 98

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\$111,709 89

*Acc't Unimproved Streets:*

Amount appropriated by city council ..... \$132,000 00

## Received for—

Inspection ..... 642 00

Constructing sidewalks..... 12,581 87

Wages deposited back..... 10 00

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\$145,233 87

*Acc't House-Moving Permits:*

Received for permits issued..... 3,465 00

---

Carried forward, \$260,408 76



Brought forward, \$260,408 76

*Acc't Street Permits:*

Received for—

|                             |            |             |
|-----------------------------|------------|-------------|
| Paving and inspection ..... | \$8,358 86 |             |
| Using streets....           | 3,790 20   |             |
| Scale permits....           | 33 00      |             |
| Vault permits...            | 3 00       |             |
|                             | <hr/>      | \$12,185 06 |

*Acc't Street Lamps:*

Amount received—

|   |             |             |
|---|-------------|-------------|
| From city comptroller for repairs, etc..... | \$16,681 19 |             |
| For lamp-posts sold.....                    | 29 00       |             |
| For brass sold....                          | 23 64       |             |
| For damages to lamps, posts, etc            | 48 53       |             |
| From special assessment fund.               | 2,232 00    |             |
|   | <hr/>       | \$19,014 36 |

*Acc't Bridge Department:*

Amount appropriated by city council..... \$60,750 00

Amount received—

|  |          |             |
|--|----------|-------------|
| For scrap-iron sold....  | 2,462 64 |             |
| For I-beams sold   | 31 62    |             |
| For damages from vessels.....  | 2,000 57 |             |
| For voucher deposited back...  | 5 53     |             |
| From C. & N.-W. Ry. Co. towards maintenance of State street viaduct..... | 400 00   |             |
|  | <hr/>    | \$65,650 36 |

Carried forward, \$357,258 54

|   |             |                    |
|---|-------------|--------------------|
| Brought forward,                          |             | \$357,258 54       |
| <i>Acc't Public Buildings:</i>            |             |                    |
| Amount appropriated by city council. .... | \$88,340 00 |                    |
| Amount received—                          |             |                    |
| For old furniture sold.....               | 17 00       |                    |
| For safe sold....                         | 50 00       |                    |
| For wire railing sold.....                | 20 00       |                    |
| For voucher deposited back...             | 98 33       |                    |
|   | <hr/>       | \$88,525 33        |
| <i>Acc't Union Park:</i>                  |             |                    |
| Amount appropriated by city council.....  | \$3,500 00  |                    |
| Amount received for rent of fruit stand   | 68 00       |                    |
|   | <hr/>       | \$3,560 00         |
| <i>Acc't Adams Street Viaduct:</i>        |             |                    |
| Amount received—                          |             |                    |
| From Chicago Passenger Railway Co.....    | \$30,000 00 |                    |
| For voucher deposited back...             | 3,462 40    |                    |
|   | <hr/>       | \$33,462 40        |
| <i>Acc't Chicago Avenue Viaduct:</i>      |             |                    |
| Amount appropriated by city council....   | \$6,994 00  |                    |
| Amount received for labor.....            | 55 00       |                    |
|   | <hr/>       | \$7,049 00         |
| Carried forward,                          |             | <hr/> \$489,855 27 |

Brought forward, \$489,855 27  
*Acc't Lake Street Bridge:*

Amount appropriated by city council..... \$65,000 00

Amount received from Chicago West Division Ry. Co., on account of substructure..... 16,829 01  
 ----- \$81,829 01

*Acc't Chicago Harbor:*

Amount appropriated by city council..... \$13,200 00

Amount received for damages to scow. 50 00  
 ----- \$13,250 00

*Acc't Canal Pumping Works:*

Amount appropriated by city council..... \$59,593 00

Amount received from error in payroll..... 38 00  
 ----- \$59,631 00

*Miscellaneous Receipts:*

Received—

From special assessment fund for cost of making assessments \$52,845 56

From comptroller, special appropriation for cleaning streets 30,000 00  
 -----

Carried forward, \$82,845 56 \$644,565 28

|                   |             |              |
|-------------------|-------------|--------------|
| Brought forward,  | \$82,845 56 | \$644,565 28 |
| From J. H o d g - |             |              |
| kins, deposit to- |             |              |
| wards cost of     |             |              |
| inspection.....   | 500 00      |              |
|                   | <hr/>       | \$83,345 56  |

*Miscellaneous Appropriations:*

For—

|                    |                    |                    |
|--------------------|--------------------|--------------------|
| Public benefits... | \$448,963 93       |                    |
| Ashland avenue     |                    |                    |
| improvement        |                    |                    |
| and bridge...      | 6,000 00           |                    |
| Sidewalk inter-    |                    |                    |
| sections, North    |                    |                    |
| division.....      | 2,500 00           |                    |
| Sidewalk inter-    |                    |                    |
| sections, South    |                    |                    |
| division.....      | 3,000 00           |                    |
| Sidewalk inter-    |                    |                    |
| sections, West     |                    |                    |
| division .....     | 4,500 00           |                    |
| Sidewalks, general |                    |                    |
| repairs.....       | 20,000 00          |                    |
| Ashland avenue     |                    |                    |
| bridge .....       | 8,000 00           |                    |
| Kedzie avenue      |                    |                    |
| bridge ... ..      | 5,600 00           |                    |
| Jackson street     |                    |                    |
| bridge .....       | 25,000 00          |                    |
| State street via-  |                    |                    |
| duct.....          | 2,500 00           |                    |
| Center avenue vi-  |                    |                    |
| aduct.....         | 2,616 62           |                    |
| Twelfth street vi- |                    |                    |
| aduct.....         | 30,000 00          |                    |
| Indiana street vi- |                    |                    |
| aduct.....         | 10,000 00          |                    |
| Carried forward,   | <hr/> \$568,680 55 | <hr/> \$727,910 84 |



|  |                       |
|--|-----------------------|
| Brought forward, \$568,680 55              | \$727,910 84          |
| Bridge-tenders' salaries . . . . .         | 54,483 10             |
| Ogden ditch dam                            | 6,000 00              |
| Fullerton avenue conduit . . . . .         | 20,000 00             |
| Lake park . . . . .                        | 2,000 00              |
| Jefferson park . . . . .                   | 1,500 00              |
| Vernon park . . . . .                      | 1,500 00              |
| Wicker park . . . . .                      | 1,000 00              |
| Union square . . . . .                     | 1,100 00              |
| Ellis park . . . . .                       | 900 00                |
| Campbell park . . . . .                    | 1,500 00              |
| Douglas Monument square . . . . .          | 600 00                |
| Aldine square . . . . .                    | 600 00                |
| Washington square . . . . .                | 1,500 00              |
| La Salle street tunnel . . . . .           | 3,500 00              |
| Washington street tunnel . . . . .         | 4,000 00              |
| Proportional salaries . . . . .            | 5,360 00              |
| Proportional office expenses . . . . .     | 833 33                |
| Salaries . . . . .                         | 61,000 00             |
| Street department office expense . . . . . | 400 00                |
| Map department office expense . . . . .    | 150 00                |
| Deficiency in collection of taxes          | 15,929 52             |
|  | <hr/>                 |
|  | \$752,536 50          |
| Total receipts . . . . .                   | <hr/>                 |
|  | <u>\$1,480,447 34</u> |

## EXPENDITURES.

*Acc't Improved Streets:*

Paid for—

|   |              |              |
|---|--------------|--------------|
| Labor and inspection.....   | \$44,891 95  |              |
| Hardware.....   | 66 40        |              |
| Blacksmithing...  | 6 50         |              |
| Paving.....   | 1,559 57     |              |
| Paving-blocks...  | 1,050 00     |              |
| Lumber.....   | 388 31       |              |
| Macadam, gravel and stone.....                                    | 2,029 05     |              |
| Sand.....   | 355 50       |              |
| Resetting curb..  | 84 22        |              |
| Plumbing.....   | 48 00        |              |
| Brooms.....   | 32 00        |              |
| Paint and oil....   | 82 07        |              |
| Repairing steam roller.....                                       | 450 89       |              |
| Coal.....   | 277 20       |              |
| Use of carts.....   | 328 50       |              |
| Sprinkling.....   | 13 50        |              |
| Hose.....   | 11 02        |              |
| Tools.....  | 9 50         |              |
| Fence.....  | 20 00        |              |
| Advertising.....  | 52 85        |              |
| Printing specifications.....                                      | 8 25         |              |
| One wagon. ....   | 90 00        |              |
| Cleaning streets by contractors.                                  | 92,176 70    |              |
| Cash payments....   | \$144,031 98 |              |
| Deduct amount charged other accounts for paving and inspection... | 222 50       |              |
|   |              | \$143,809 48 |
| Carried forward,  |              | \$143,809 48 |

Brought forward, . \$143,809 48  
*Acc't Unimproved Streets:*

Paid for—

|                    |              |
|--------------------|--------------|
| Labor.....         | \$103,955 28 |
| Lumber.....        | 17,351 62    |
| Hardware.....      | 1,792 11     |
| Tools and repair-  |              |
| ing.....           | 608 65       |
| Resetting curb.    | 504 01       |
| Macadam.....       | 2,280 94     |
| Paving.....        | 432 87       |
| Paving-blocks...   | 315 00       |
| Planking inter-    |              |
| sections... ..     | 45 90        |
| Oil .....          | 11 57        |
| Earth filling. ... | 212 52       |
| Ground rent.....   | 308 54       |
| Road - making      |              |
| machine .....      | 210 00       |
| Cleaning vault...  | 15 00        |
| One cart.....      | 28 00        |
| One plow .....     | 33 50        |
| Printing.....      | 6 75         |
| Rebate.....        | 5 50         |
| Freight.....       | 7 56         |

\$128,125 32

*Acc't Special Appropriation,*  
*Street Cleaning:*

Paid for—

|            |             |
|------------|-------------|
| Labor..... | \$29,910 00 |
| Tools..... | 90 00       |

\$30,000 00

*Acc't Public Buildings:*

Paid for—

|            |            |
|------------|------------|
| Coal ..... | \$9,181 86 |
| Labor..... | 24,834 09  |

Carried forward, \$34,015 95 \$301,934 80

|                                     |             |              |
|-------------------------------------|-------------|--------------|
| Brought forward,                    | \$84,015 95 | \$301,934 80 |
| Electric plant...                   | 41,375 40   |              |
| Soap, etc.....                      | 85 35       |              |
| Sponges, rubber<br>scrapers, etc... | 56 98       |              |
| Plumbing.....                       | 99 30       |              |
| Gas. ....                           | 5,606 33    |              |
| Salt .....                          | 5 00        |              |
| Engineersupplies                    | 215 48      |              |
| Scale.....                          | 42 00       |              |
| Lettering doors,<br>etc.....        | 57 10       |              |
| Teaming.....                        | 123 00      |              |
| Sawdust.....                        | 16 00       |              |
| Locksmithing...                     | 25 70       |              |
| Draping City Hall                   | 300 00      |              |
| Paint and oil....                   | 365 87      |              |
| Lumber.....                         | 739 94      |              |
| Hardware.....                       | 264 82      |              |
| Dusters, brooms,<br>etc.....        | 280 71      |              |
| Matting and<br>cleaning.....        | 39 75       |              |
| Toilet paper....                    | 70 00       |              |
| Steam and gas-<br>fitting.....      | 360 32      |              |
| Solder.....                         | 6 85        |              |
| Cuspidors .....                     | 97 55       |              |
| Wire railing....                    | 84 55       |              |
| Machine work...                     | 86 17       |              |
| Lamp-shades, etc                    | 14 50       |              |
| Packing and<br>waste.....           | 82 42       |              |
| Glass.....                          | 53 65       |              |
| Running boilers.                    | 343 00      |              |
| Repairing boilers                   | 189 80      |              |
| Carried forward,                    | \$85,103 49 | \$301,934 80 |



|   |             |                     |
|---|-------------|---------------------|
| Brought forward,                        | \$85,103 49 | \$301,934 80        |
| Oilcloth.....                           | 5 13        |                     |
| Gas fixtures.....                       | 8 75        |                     |
| Removing cinders                        | 56 80       |                     |
| Soda.....                               | 18 50       |                     |
| Repairing clocks.                       | 3 50        |                     |
| Ice.....                                | 90 90       |                     |
| Flag-staff and<br>ball.....             | 58 50       |                     |
| Cloth.....                              | 10 60       |                     |
| Printing.....                           | 3 25        |                     |
| Advertising.....                        | 26 94       |                     |
|   |             | <u>\$85,386 36</u>  |
| <i>Acc't Sidewalks, North Division:</i> |             |                     |
| Paid for—                               |             |                     |
| Labor.....                              | \$583 99    |                     |
| Lumber.....                             | 397 64      |                     |
| Hardware.....                           | 15 00       |                     |
| Car fare and post-<br>age.....          | 183 62      |                     |
|   |             | <u>\$1,180 25</u>   |
| <i>Acc't Sidewalks, South Division:</i> |             |                     |
| Paid for—                               |             |                     |
| Labor.....                              | \$702 13    |                     |
| Lumber.....                             | 815 08      |                     |
| Hardware.....                           | 149 00      |                     |
| Car fare and post-<br>age.....          | 141 94      |                     |
|   |             | <u>\$1,808 15</u>   |
| <i>Acc't Sidewalks, West Division:</i>  |             |                     |
| Paid for—                               |             |                     |
| Labor.....                              | \$2,133 55  |                     |
| Lumber.....                             | 3,319 13    |                     |
| Hardware.....                           | 227 25      |                     |
| Teaming.....                            | 7 00        |                     |
| Car fare and post-<br>age.....          | 191 77      |                     |
|   |             | <u>\$5,878 70</u>   |
| Carried forward,                        |             | <u>\$396,188 26</u> |

Brought forward, \$396,188 26

*Acc't Sidewalks, General Repairs:*

Paid for—

|               |            |            |
|---------------|------------|------------|
| Lumber.....   | \$2,664 32 |            |
| Hardware..... | 520 00     |            |
| Labor.....    | 6,384 62   |            |
|               |            | \$9,568 94 |

*Acc't Union Park:*

Paid for—

|  |            |            |
|--|------------|------------|
| Labor (including<br>keeper's salary)           | \$1,695 60 |            |
| Coal.....                                      | 11 70      |            |
| Food for animals.                              | 305 35     |            |
| Paint and oil....                              | 6 08       |            |
| Storing plants...                              | 3 00       |            |
| Hardware.....                                  | 11 60      |            |
| Lumber.....                                    | 35 52      |            |
| Tools and repair-<br>ing.....                  | 45 54      |            |
| Fence.....                                     | 58 25      |            |
| Repairing and<br>painting build-<br>ings.....  | 714 67     |            |
| Repairing fount-<br>ain.....                   | 30 00      |            |
| Plumbing.....                                  | 48 00      |            |
| Building and<br>painting water<br>closets..... | 359 75     |            |
|  |            | \$3,325 06 |

*Acc't Jefferson Park:*

Paid for—

|                                     |            |              |
|-------------------------------------|------------|--------------|
| Labor and keep-<br>er's salary..... | \$1,097 60 |              |
| Food for animals.                   | 2 25       |              |
|                                     |            |              |
| Carried forward,                    | \$1,099 85 | \$409,082 26 |

|                           |            |              |
|---------------------------|------------|--------------|
| Brought forward,          | \$1,099 85 | \$409,082 26 |
| Paint and oil.....        | 15 35      |              |
| Coal.....                 | 3 90       |              |
| Storing plants...         | 3 00       |              |
| Hardware.....             | 15 86      |              |
| Tools and repair-         |            |              |
| ing.....                  | 19 23      |              |
| Lumber.....               | 36 96      |              |
| Painting fountain         | 48 00      |              |
| Plumbing.....             | 54 77      |              |
| Iron posts... ..          | 8 00       |              |
| Wire fencing.....         | 5 40       |              |
|                           |            | \$1,310 32   |
| <i>Acc't Vernon Park:</i> |            |              |
| Paid for—                 |            |              |
| Labor and keep-           |            |              |
| er's salary....           | \$1,015 60 |              |
| Hardware.....             | 3 32       |              |
| Tools and repair-         |            |              |
| ing.....                  | 18 09      |              |
| Cement.....               | 1 25       |              |
| Painting.....             | 146 00     |              |
| Plumbing.....             | 25 75      |              |
| Constructing              |            |              |
| vault.....                | 35 84      |              |
|                           |            | \$1,245 85   |
| <i>Acc't Wicker Park:</i> |            |              |
| Paid for—                 |            |              |
| Labor and keep-           |            |              |
| er's salary....           | \$698 60   |              |
| Tools and repair-         |            |              |
| ing.....                  | 48 76      |              |
| Coal.....                 | 3 90       |              |
| Painting.....             | 45 00      |              |
| Hardware.....             | 3 15       |              |
| Sewerage.....             | 6 75       |              |
|                           |            | \$801 16     |
| Carried forward,          |            | \$412,439 59 |

Brought forward, \$412,439 59  
*Acc't Campbell Park:*

Paid for—

|                                   |          |            |
|-----------------------------------|----------|------------|
| Labor.....                        | \$200 50 |            |
| Hardware.....                     | 10 55    |            |
| Tools, seeds, etc.                | 1 85     |            |
| Plumbing.....                     | 61 50    |            |
| Earth filling and<br>sodding..... | 1,055 71 |            |
|                                   |          | \$1,330 11 |

*Acc't Union Square:*

Paid for—

|                    |          |            |
|--------------------|----------|------------|
| Earth filling..... | \$449 82 |            |
| Labor.....         | 184 63   |            |
| Lumber.....        | 161 25   |            |
| Resetting curb..   | 44 30    |            |
| Planting trees...  | 260 00   |            |
|                    |          | \$1,100 00 |

*Acc't Washington Square:*

Paid for—

|                                     |            |            |
|-------------------------------------|------------|------------|
| Labor and keep-<br>er's salary..... | \$1,063 11 |            |
| Hardware.....                       | 5 60       |            |
| Paint and oil....                   | 5 88       |            |
| Tools and repair-<br>ing.....       | 22 26      |            |
| Sprinkling .....                    | 120 00     |            |
| Plumbing .....                      | 23 40      |            |
|                                     |            | \$1,240 25 |

*Acc't Lake Park:*

Paid for—

|                                     |            |              |
|-------------------------------------|------------|--------------|
| Labor and keep-<br>er's salary..... | \$1,729 22 |              |
| Paint and oil....                   | 6 80       |              |
| Tools and repair-<br>ing .....      | 40 64      |              |
|                                     |            |              |
| Carried forward,                    | \$1,776 66 | \$416,109 95 |



|                  |            |              |
|------------------|------------|--------------|
| Brought forward, | \$1,776 66 | \$416,109 95 |
| Hardware .....   | 1 75       |              |
| Plumbing .....   | 2 80       |              |
|                  | <hr/>      | \$1,781 21   |

*Acc't Ellis Park:*

Paid for—

|                                |          |          |
|--------------------------------|----------|----------|
| Labor and keeper's salary..... | \$674 25 |          |
| Hardware .....                 | 1 50     |          |
| Tools.....                     | 9 12     |          |
| Repairing fences.              | 300 00   |          |
|                                | <hr/>    | \$984 87 |

*Acc't Aldine Square:*

Paid—

|                   |          |
|-------------------|----------|
| Keeper's salary.. | \$600 00 |
|-------------------|----------|

*Acc't Douglas Monument Square:*

Paid for—

|                           |          |          |
|---------------------------|----------|----------|
| Keeper's salary..         | \$600 00 |          |
| Hardware.....             | 4 10     |          |
| Painting iron work.....   | 10 00    |          |
| Repairing vault door..... | 9 00     |          |
|                           | <hr/>    | \$623 10 |

*Acc't Chicago Harbor:*

Paid for—

|   |            |              |
|---|------------|--------------|
| Salary of three harbor masters and labor..... | \$5,111 55 |              |
| Tug service.....                              | 370 50     |              |
| Dredging .. ...                               | 1,841 68   |              |
| Boats and repairing .....                     | 46 50      |              |
| Paint and oil....                             | 4 00       |              |
| Rope and chain.                               | 17 12      |              |
| Cedar posts.....                              | 12 00      |              |
| Teaming.....                                  | 1 75       |              |
|   | <hr/>      |              |
| Carried forward,                              | \$7,405 10 | \$420,099 13 |

|                                 |            |              |
|---------------------------------|------------|--------------|
| Brought forward,                | \$7,405 10 | \$420,099 13 |
| Tools.....                      | 9 40       |              |
| Damages.....                    | 50 00      |              |
| Desplaines river<br>survey..... | 2,059 59   |              |
|                                 | <hr/>      | \$9,524 09   |

*Acc't Canal Pumping Works:*

(Operating and Maintenance.)

Paid for—

|  |             |
|--|-------------|
| Engineers, Fire-<br>men, oilers and<br>laborers..... | \$16,179 67 |
| Coal.....  | 25,906 35   |
| Castings.....  | 155 71      |
| Hardware.....  | 88 75       |
| Oil.....   | 766 17      |
| Steam-fitting...                                     | 138 20      |
| Waste and pack-<br>ing.....                          | 63 19       |
| Tools and re-<br>pairs.....                          | 108 38      |
| Lumber.....  | 369 50      |
| Bricks.....  | 13 75       |
| Steam hose.....                                      | 12 37       |
| Lime.....  | 1 40        |
| Soap and lye....                                     | 5 80        |
| Rope.....  | 1 02        |
| Indicator cards..                                    | 5 34        |
| Blacksmithing ..                                     | 197 77      |
| Tug service.....                                     | 54 00       |
| Fire brick and<br>clay.....                          | 108 00      |
| Teaming.....   | 63 45       |
| Dredging.....  | 318 00      |
| Lead.....  | 2 00        |
| Scrap iron.....                                      | 57 78       |

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Carried forward,    \$44,616 60    \$429,623 22

|  |             |              |
|--|-------------|--------------|
| Brought forward,                       | \$44,616 60 | \$429,623 22 |
| Repairing hy-                          |             |              |
| drants.....                            | 11 00       |              |
| Advertising.....                       | 16 47       |              |
|  | <hr/>       | \$44,644 07  |
| <i>Acc't Canal Pumping Works:</i>      |             |              |
| (Construction.)                        |             |              |
| Paid for--                             |             |              |
| Services of ex-                        |             |              |
| perts testing                          |             |              |
| engines.....                           | \$2,217 93  |              |
| Labor.....                             | 443 16      |              |
|  | <hr/>       | \$2,661 09   |
| <i>Acc't Fullerton Avenue Conduit:</i> |             |              |
| Paid for--                             |             |              |
| Salary of Engin-                       |             |              |
| eers, Firemen,                         |             |              |
| oilers and la-                         |             |              |
| borers.....                            | \$7,213 60  |              |
| Coal.....                              | 8,190 81    |              |
| Repairing boilers                      |             |              |
| and engines...                         | 534 96      |              |
| Oil and grease...                      | 823 01      |              |
| Valves and                             |             |              |
| fittings.....                          | 93 69       |              |
| Lumber.....                            | 367 32      |              |
| Machine work...                        | 299 62      |              |
| 1 pump.....                            | 161 50      |              |
| Rubble stone....                       | 270 00      |              |
| Waste and gasket                       | 32 62       |              |
| Wheelbarrows...                        | 26 20       |              |
| Repairing water                        |             |              |
| pipe.....                              | 2 60        |              |
| Hardware.....                          | 21 28       |              |
| Cement.....                            | 1 25        |              |
| Castings.....                          | 73 45       |              |
|  | <hr/>       |              |
| Carried forward,                       | \$18,111 91 | \$476,928 38 |

|                            |             |              |
|----------------------------|-------------|--------------|
| Brought forward,           | \$18,111 91 | \$476,928 38 |
| 1 lubricator.....          | 27 50       |              |
| Tug service.....           | 32 00       |              |
| Cartage.....               | 4 00        |              |
| Propeller wheels.          | 224 50      |              |
| Rubber boots...            | 4 28        |              |
| Brooms and<br>brushes..... | 6 75        |              |
| Diving.....                | 60 00       |              |
| Advertising.....           | 29 94       |              |
|                            |             | \$18,500 88  |

*Acct Repairs of Bridges and Approaches:*

Paid for—

|   |             |              |
|---|-------------|--------------|
| Iron and machine<br>work.....                 | \$3,449 47  |              |
| Oil and paint....                             | 1,371 19    |              |
| Lumber.....                                   | 23,362 00   |              |
| Labor.....                                    | 27,063 76   |              |
| Building docks,<br>driving piles,<br>etc..... | 3,697 36    |              |
| Bricks.....                                   | 27 55       |              |
| Coal.....                                     | 1,570 85    |              |
| Lamps, burners,<br>etc.....                   | 191 72      |              |
| Steam-fitting....                             | 213 24      |              |
| Damages.....                                  | 2,341 27    |              |
| Teaming.....                                  | 7 00        |              |
| Clocks and re-<br>pairing.....                | 30 70       |              |
| Castings.....                                 | 1,220 34    |              |
| Paving.....                                   | 893 68      |              |
| Roofing.....                                  | 53 80       |              |
| Electric lights<br>and carbons...             | 151 91      |              |
| Turntables and<br>repairing.....              | 704 67      |              |
| Carried forward,                              | \$66,350 51 | \$495,429 26 |



|  |                    |              |
|--|--------------------|--------------|
| Brought forward,                               | \$66,350 51        | \$495,429 26 |
| Tug service . . . .                            | 206 20             |              |
| Stoves . . . . .                               | 51 68              |              |
| Plastering . . . . .                           | 61 63              |              |
| Ground rent . . . .                            | 66 67              |              |
| Window frames..                                | 6 50               |              |
| Bridge bell and<br>mountings . . . .           | 29 98              |              |
| Repairing boilers                              | 4 15               |              |
| Sign painting . . .                            | 16 00              |              |
| Tools and rope..                               | 840 50             |              |
| Advertising . . . .                            | 47 49              |              |
| Printing notices.                              | 19 50              |              |
| Hardware . . . . .                             | 1,724 12           |              |
| Cash payments . . . .                          | \$69,424 93        |              |
| Deduct for mate-<br>rial transfer-<br>red to-- |                    |              |
| Viaduct Repairs..                              | \$2,252 46         |              |
| LaSalle st. tunnel                             | 283 66             |              |
| Washington street<br>tunnel. . . . .           | 78 49              |              |
| Fullerton av. con-<br>duit . . . . .           | 31 28              |              |
| Ashland av. im-<br>provement . .               | 96 86              |              |
| Adams st. viaduct                              | 224 50             |              |
|  | <u>\$2,967 25</u>  |              |
|  |                    | \$66,457 68  |
| <i>Acc't Viaduct Repairs:</i>                  |                    |              |
| Paid for—                                      |                    |              |
| Labor . . . . .                                | \$10,936 38        |              |
| Lumber . . . . .                               | 1,864 84           |              |
| Hardware . . . . .                             | 387 62             |              |
|  | <u>\$13,188 84</u> |              |
| Carried forward,                               |                    | \$575,075 78 |

Brought forward, \$575,075 78  
*Acc't Chicago Avenue Viaduct:*

Paid for—

Raising buildings,  
 damages, etc.. \$20,659 00

Final estimate,  
 superstructure. 100 00

Iron..... 28 57

Paving ap-  
 proaches..... 639 35

Cement..... 1 25

Plats and surveys 26 00

Plumbing..... 7 98

Land purchased.. 2,650 00

Labor..... 159 85

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\$24,272 00

*Acc't Centre Avenue Viaduct:*

Paid for—

Raising build-  
 ings, damages,  
 etc.... \$17,034 79

Labor..... 726 69

Final estimate,  
 superstructure. 100 00

Lumber.... 540 85

Drainage..... 67 50

Paving.... 22 50

Hardware..... 31 55

Advertising.... 5 00

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\$18,528 88

*Acc't Erie Street Viaduct:*

Paid for—

Superstructure... \$37,438 00

Labor..... 2,876 82

Paving.... 606 30

Repairing tools.. 5 19

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Carried forward, \$40,926 31 \$617,876 66

|                   |             |              |
|-------------------|-------------|--------------|
| Brought forward,  | \$40,926 31 | \$617,876 66 |
| Stone .....       | 289 55      |              |
| Sand .....        | 50 00       |              |
| Cement .....      | 162 20      |              |
| Bricks .....      | 47 50       |              |
| Teaming .....     | 232 75      |              |
| Stone coping .... | 892 79      |              |
| Iron work .....   | 136 95      |              |
| Advertising ..... | 13 80       |              |
|                   |             | <hr/>        |
|                   |             | \$42,751 85  |

*Acc't Adams Street Viaduct:*

## Paid for—

|                                     |            |
|-------------------------------------|------------|
| Labor .....                         | \$4,075 74 |
| Cement .....                        | 133 00     |
| Lumber .....                        | 184 30     |
| Sand .....                          | 37 50      |
| Rope and blocks.                    | 32 43      |
| Bricks .....                        | 180 00     |
| Hardware .....                      | 55 10      |
| Stone .....                         | 867 90     |
| Teaming .....                       | 9 60       |
| Iron work .....                     | 3 34       |
| Sharpening tools.                   | 41 19      |
| Transportation ..                   | 17 50      |
| Advertising .....                   | 17 46      |
| Blue prints of<br>plans .....       | 6 29       |
| *Superstructure,<br>on account .... | 27,893 00  |
|                                     | <hr/>      |

Cash payments.. \$33,554 35

Deduct for Material  
furnished for--

Bridge Repairs. . . \$46 95

Ashland Avenue bridge 45 00

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\$91 95      \$33,462 40

Carried forward,

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\$694,090 91

\*Of this amount \$3,462.40 credited back; see "Receipts Adams Street Viaduct."

## BOOK-KEEPER'S STATEMENT.

:11

|                                     |              |             |
|-------------------------------------|--------------|-------------|
| Brought forward,                    | \$694,090 91 |             |
| <i>Acc't Lake Street Viaduct:</i>   |              |             |
| Paid for--                          |              |             |
| Advertising.....                    | \$13 62      |             |
| Blue prints of<br>plans.....        | 11 97        |             |
| Printing speci-<br>fications.....   | 12 50        |             |
|                                     |              | \$38 09     |
| <i>Acc't Lake Street Bridge:</i>    |              |             |
| Paid for—                           |              |             |
| Labor.....                          | \$1,408 06   |             |
| Advertising.....                    | 66 87        |             |
| Blue prints of<br>plans.....        | 77 91        |             |
| Printing speci-<br>fications.....   | 24 75        |             |
| Teaming.....                        | 1 85         |             |
| Substructure (on<br>account).....   | 43,080 13    |             |
|                                     |              | \$44,659 57 |
| <i>Acc't Ashland Avenue Bridge:</i> |              |             |
| (Over Canal.)                       |              |             |
| Paid for—                           |              |             |
| Labor.....                          | \$1,629 36   |             |
| Teaming... ..                       | 147 20       |             |
| Blacksmithing...                    | 18 84        |             |
| Advertising.....                    | 13 68        |             |
| Blue prints of<br>plans.....        | 5 51         |             |
| Sand.....                           | 37 50        |             |
| Cement.....                         | 102 50       |             |
| Lumber.....                         | 59 15        |             |
| Stone.....                          | 213 00       |             |
|                                     |              | \$2,226 74  |
| Carried forward,                    | \$741,015 31 |             |



Brought forward, \$741,015 31  
*Acc't Ashland Avenue Improvement  
 and Bridge, over Inlet:*

Paid—

|   |            |            |
|---|------------|------------|
| Contractor for<br>improving<br>street, on ac-<br>count..... | \$6,264 87 |            |
| For driving piles.  | 130 40     |            |
| For labor.....  | 493 62     |            |
| For lumber.....   | 93 11      |            |
| For hardware....  | 18 00      |            |
|   |            | \$7,000 00 |

*Acc't Ogden Ditch Dam:*

Paid for—

|                   |            |            |
|-------------------|------------|------------|
| Labor.....        | \$3,986 31 |            |
| Transportation .. | 38 92      |            |
| Stone.....        | 1,483 72   |            |
| Lumber.....       | 642 40     |            |
| Tug service.....  | 243 91     |            |
| Rope, oakum, etc. | 25 30      |            |
| Teaming.....      | 47 81      |            |
| Hardware.....     | 99 46      |            |
| Canvas.....       | 6 00       |            |
| Wheelbarrows...   | 22 50      |            |
| Blacksmithing...  | 8 00       |            |
| Machine work...   | 29 30      |            |
| Boarding laborers | 513 36     |            |
|                   |            | \$7,146 99 |

*Acc't Washington Street Tunnel:*

Paid for—

|                                 |            |              |
|---------------------------------|------------|--------------|
| Labor.....                      | \$1,932 88 |              |
| Machine work...                 | 241 47     |              |
| Steam and gas-<br>fitting ..... | 26 31      |              |
| Salt .....                      | 1 60       |              |
|                                 |            |              |
| Carried forward,                | \$2,202 26 | \$755,162 30 |

|                  |            |              |
|------------------|------------|--------------|
| Brought forward, | \$2,202 26 | \$755,162 30 |
| Plumbing .....   | 9 21       |              |
| Oil .....        | 4 49       |              |
| Lumber.....      | 60 00      |              |
| Coal.....        | 169 15     |              |
| Hardware.....    | 14 00      |              |
|                  |            | \$2,459 11   |

*Acc't La Salle Street Tunnel:*

## Paid for—

|                  |            |            |
|------------------|------------|------------|
| Labor.....       | \$2,145 59 |            |
| Drain tile.....  | 6 40       |            |
| Coal.....        | 98 63      |            |
| Gas-fitting..... | 8 85       |            |
| Belting.....     | 31 49      |            |
| Lumber.....      | 255 70     |            |
| Hardware.....    | 7 20       |            |
| Teaming.....     | 3 30       |            |
|                  |            | \$2,557 06 |

*Acc't Special Assessments:*

## Paid for—

|                                 |            |              |
|---------------------------------|------------|--------------|
| Advertising .....               | \$5,996 37 |              |
| Expert services..               | 3,625 00   |              |
| Making assessments .....        | 5,056 00   |              |
| Appraising buildings .....      | 535 00     |              |
| Legal expenses..                | 6,631 70   |              |
| Engineering and inspecting..... | 7,956 86   |              |
| Clerks' hire.....               | 3,425 75   |              |
| Collecting special taxes.....   | 17,096 20  |              |
| Books, printing and stationery. | 943 35     |              |
| Car fare and Postage.....       | 817 91     |              |
|                                 |            | \$ 52,084 14 |
| Carried forward,                |            | \$812,262 61 |

Brought forward, \$812,262 61  
*Acc't Street Lamps:*

Paid for—

|                             |            |
|-----------------------------|------------|
| Labor.....                  | \$4,552 40 |
| Glass .....                 | 3,486 72   |
| Lamp fixtures...            | 3,951 68   |
| Covering gas-pipes .....    | 47 25      |
| Pipe fitting.....           | 25 14      |
| Hardware .....              | 100 78     |
| Solder .....                | 224 00     |
| Shop rent.....              | 420 00     |
| Gas at shop.....            | 47 40      |
| Advertising.....            | 26 04      |
| Charcoal and coke.....      | 51 50      |
| Tools and repairing.....    | 29 36      |
| Horse-shoeing...            | 30 65      |
| Paint, oil and acid .....   | 179 55     |
| Printing.....               | 5 70       |
| Street signs.....           | 2,334 62   |
| Tin. ....                   | 775 24     |
| Horse feed.....             | 107 42     |
| Repairing harness.....      | 22 50      |
| Lamp-posts.....             | 2,524 37   |
| Removing manure.....        | 6 00       |
| Use of horse and wagon..... | 51 75      |
| Repairing wagon.            | 16 05      |
| Car fare.....               | 1 36       |

\$19,017 48

*Acc't House Moving Permits:*

Paid for—

|               |            |
|---------------|------------|
| Salaries..... | \$2,100 00 |
|---------------|------------|

|                  |            |              |
|------------------|------------|--------------|
| Carried forward, | \$2,100 00 | \$831,280 09 |
|------------------|------------|--------------|

|                              |            |              |
|------------------------------|------------|--------------|
| Brought forward,             | \$2,100 00 | \$831,280 09 |
| Trimming trees..             | 47 30      |              |
| Printing and stationery .... | 35 00      |              |
| Car fare.....                | 1 60       |              |
| Permits refunded             | 5 00       |              |
|                              | <hr/>      | \$2,188 90   |

*Acc't Street Permits:*

## Paid for—

|                              |            |            |
|------------------------------|------------|------------|
| Paving.....                  | \$1,101 22 |            |
| Printing and stationery..... | 25 25      |            |
| Labor.....                   | 590 00     |            |
| Permits refunded             | 12 00      |            |
|                              | <hr/>      | \$1,728 47 |

*Acc't Public Benefits:*

## Paid for—

|  |              |              |
|--|--------------|--------------|
| Improving City's portion of streets.....   | \$438,749 56 |              |
| Refunded amount advanced by sundry parties for paving intersections in 1884..... | 7,866 87     |              |
|  | <hr/>        | \$446,616 43 |

*Acc't Salaries:*

## Paid—

|  |            |                |
|--|------------|----------------|
| One-third salaries of Commissioner, City Engineer, Secretary, Book-keeper, etc.... | \$5,244 98 |                |
|  | <hr/>      |                |
| Carried forward,   | \$5,244 98 | \$1,281,813 89 |



Brought forward,     \$5,244 98   \$1,281,813 89

Salaries in—

City Engineer's  
office..... 6,308 14

Street depart-  
ment..... 26,493 50

Special assess-  
ment office.. 15,757 99

Map office .... 5,209 99

Bridge tenders'  
salary..... 53,500 18

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\$112,514 78

*Acc't Office Expenses:*

a—Commissioner's and  
City Engineer's Office:

Paid for—

Car fare..... \$ 54 21

Postage..... 105 94

Lithographing... 72 34

Advertising..... 16 25

Binding papers.. 26 77

Books, printing  
and stationery. 201 72

One-third cost  
printing annu-  
al report..... 299 02

Letter press.... 41 50

Lettering boxes. 9 35

Labor..... 8 49

Newspapers. .... 6 50

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\$842 09

b--Street Department:

Paid for--

Tape lines..... \$ 18 45

Books, printing  
and stationery. 167 30

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Carried forward,     \$185 75   \$1,395,170 76

|                                 |          |                |
|---------------------------------|----------|----------------|
| Brought forward,                | \$185 75 | \$1,395,170 76 |
| Car fare.....                   | 131 43   |                |
| Postage.....                    | 41 90    |                |
| Repairing instru-<br>ments..... | 12 00    |                |
| Soda.....                       | 9 05     |                |

---

\$380 13

*c*—Map Office Expenses:

Paid for—

|                                    |         |
|------------------------------------|---------|
| Mounting maps..                    | \$24 15 |
| Draughting tools<br>and paper..... | 115 25  |
| 1 map of Chicago                   | 6 00    |
| 1 city directory..                 | 5 00    |
| Binding atlases..                  | 32 00   |

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\$182 40

*Miscellaneous Expenditures:*

|   |            |
|---|------------|
| Refunded West-<br>ern Union Tel-<br>egraph Co., a<br>deposit for pav-<br>ing and inspec-<br>tion..... | \$1,500 00 |
|---|------------|

|  |        |
|--|--------|
| Refunded to Rob-<br>ert Stewart a<br>deposit for pav-<br>ing and inspec-<br>tion ..... | 463 00 |
|--|--------|

|   |        |
|---|--------|
| Refunded to J.<br>Hodgkins, a de-<br>posit for pav-<br>ing and inspec-<br>tion..... | 500 00 |
|---|--------|

|                                   |          |
|-----------------------------------|----------|
| Paid for one steam<br>roller..... | 4,800 00 |
|-----------------------------------|----------|

---

\$7,263 00

Total expendi-  
tures.....

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\$1,402,996 29

## CITY HALL FUND.

## RECEIPTS.

|  |                    |
|--|--------------------|
| Amount appropriated by City Council.....     | \$59,328 00        |
| Amount received for rubble stone sold.....   | 6 00               |
| Amount received for wages credited back..... | 61 25              |
| Total receipts.                              | <u>\$59,395 25</u> |

## EXPENDITURES.

Paid to contractors as follows:

|   |                    |
|---|--------------------|
| Otley Manufacturing Co., covering steam pipes.....      | \$3,374 19         |
| John Davis & Co., heating apparatus.....                | 241 43             |
| Cudell & Meissner, carpenter and terra cotta work ..... | 21,410 30          |
| H. A. Streeter, inside iron work.                       | 120 52             |
| Ed. E. Swiney, fixed furniture.                         | 3,340 00           |
| Alex. Watson, plumbing and gas fitting.....             | 1,961 64           |
| Carried forward,  | <u>\$30,448 08</u> |

|  |             |             |
|--|-------------|-------------|
| Brought forward,   | \$30,448 08 |             |
| Kellogg, Johnson<br>& Bliss, hard-<br>ware . . . . .     | 1,096 49    |             |
| P. J. Sexton, ro-<br>tunda . . . . .                     | 2,209 66    |             |
| A. E. Fortin, car-<br>penter work . . .                  | 200 00      |             |
| Sprague, Smith &<br>Co., glass . . . . .                 | 7,375 00    |             |
| C r a n e Brothers<br>Manufacturing<br>Co., elevators..  | 16,452 50   |             |
| Manning & Phil-<br>lips, painting<br>iron work . . . . . | 392 50      |             |
| Burlington Man-<br>ufacturing Co.,<br>marble work . . .  | 5,656 24    |             |
| Mitchell & Hol-<br>back, frescoing<br>and painting . . . | 13,645 00   |             |
| Granolithic Co.<br>of C h i c a g o,<br>steps . . . . .  | 1,700 45    |             |
|  |             | \$79,175 92 |
| <i>Miscellaneous Expenditures:</i>                       |             |             |
| Paid for—  |             |             |
| Labor . . . . .  | \$11,665 30 |             |
| Carpenter work..   | 1,582 65    |             |
| Plastering in sub-<br>basement . . . .                   | 296 36      |             |
| Ventilating pan-<br>els . . . . .                        | 189 37      |             |
| Foundations fo r<br>elevators . . . . .                  | 600 00      |             |
| Carried forward,   | \$14,333 68 | \$79,175 92 |



|                                    |             |             |
|------------------------------------|-------------|-------------|
| Brought forward,                   | \$14,333 68 | \$79,175 92 |
| Bracing portico.                   | 5,919 56    |             |
| Meter cover and<br>frame .....     | 12 10       |             |
| Stone cutting....                  | 20 46       |             |
| Decorating iron<br>work.....       | 500 00      |             |
| Lumber.....                        | 489 09      |             |
| Lubricators.....                   | 88 20       |             |
| Flag pole.....                     | 116 10      |             |
| Hardware.....                      | 172 23      |             |
| Tile.....                          | 298 65      |             |
| Teaming.....                       | 70 25       |             |
| Tin.....                           | 127 00      |             |
| Glass.....                         | 94 20       |             |
| Gas fitting.....                   | 42 93       |             |
| Bricks.....                        | 374 75      |             |
| Sand.....                          | 41 50       |             |
| Brooms.....                        | 3 00        |             |
| Lightning rod...                   | 228 76      |             |
| Pavements (gran-<br>olithic) ..... | 1,920 47    |             |
| Pavements (ce-<br>ment).....       | 1,370 01    |             |
| Plumbing.....                      | 5 00        |             |
| Running boilers.                   | 798 55      |             |
| Paint and oil....                  | 79 74       |             |
| Iron cell doors<br>and guards....  | 282 60      |             |
| Telephones.....                    | 495 00      |             |
| Advertising.....                   | 118 10      |             |
| Cement and lime.                   | 201 95      |             |
| Alterations on<br>roof.....        | 569 10      |             |
| Roofing tanks...                   | 171 55      |             |
| Draughting ma-<br>terial .....     | 15 00       |             |
| Carried forward,                   | \$28,959 53 | \$79,175 92 |

## BOOK-KEEPER'S STATEMENT.

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|                               |             |             |
|-------------------------------|-------------|-------------|
| Brought forward,              | \$28,959 53 | \$79,175 92 |
| Concrete and gravel.....      | 37 25       |             |
| Frescoing.....                | 409 40      |             |
| Iron work.....                | 953 28      |             |
| Fire clay.....                | 59 00       |             |
| Protectors for radiators..... | 500 00      |             |
| Scale.....                    | 140 00      |             |
| Painting water pipe.....      | 80 00       |             |
| Doors.....                    | 56 00       |             |
| Gas.....                      | 477 84      |             |
| Wire window guards.....       | 33 50       |             |
| Sign writing.....             | 26 00       |             |
| Steam fitting.....            | 1,574 32    |             |
| Sewerage.....                 | 61 96       |             |
|                               |             | \$33,368 08 |

*Furnishing City Hall:*

Paid for—

|   |             |
|---|-------------|
| Desks, chairs, carpets, safes, etc..... | \$12,051 06 |
|---|-------------|

Total expenditures.....

\$124,595 06

## TRIAL BALANCE.

LEDGER, DEPARTMENT OF PUBLIC WORKS, DECEMBER  
31, 1885.

|  | Dr.             | Cr.             |
|--|-----------------|-----------------|
| Water fund.....                                  | \$ 1,128,570 90 |                 |
| Water works.....                                 | 10,416,343 99   |                 |
| Water works income.....                          |                 | \$16,868,845 15 |
| Water fund suspended acct's                      | 180,292 72      |                 |
| Water fund general taxes...                      |                 | 2,713,878 53    |
| Water loan bonds, 6 per cent.                    |                 | 133,000 00      |
| Water loan bonds, 7 per cent.                    |                 | 3,490,000 00    |
| Water loan bonds, $3\frac{5}{100}$ per cent..... |                 | 333,000 00      |
| Water loan bonds canceled.                       |                 | 858,000 00      |
| Water loan interest.....                         | 5,667,302 08    |                 |
| Water works expenses and repairs.....            | 6,896,084 62    |                 |
| American Exchange Nation'l Bank, N. Y.....       | 122,813 55      |                 |
| F. C. Meyer, book-keeper...                      | 300 00          |                 |
| J. W. Lyons, cashier.....                        | 691 88          |                 |
| Meter department stock account.....              | 8,381 25        |                 |
| Tapping department stock account.....            | 4,679 15        |                 |
| Water works shop.....                            | 3,998 03        |                 |
| Water works stable.....                          | 64 75           |                 |
| Northwestern Leather Co..                        |                 | 1,026 90        |
| A. T. Ewing.....                                 |                 | 437 70          |
| Archbishop Feehan.....                           |                 | 1,773 43        |
| Ogden, Sheldon & Co.....                         |                 | 1,734 23        |
| Barrett, Todd & Cochran...                       |                 | 250 00          |
| John Tyrrell.....                                |                 | 150 00          |
| Carried forward,                                 | \$24,429,522 92 | \$24,402,095 94 |

|   |                 |                 |
|---|-----------------|-----------------|
| Brought forward,                          | \$24,429,522 92 | \$24,402,095 94 |
| Wm. Graydon.....                          |                 | 250 00          |
| John D. Parker.....                       |                 | 884 12          |
| West Chicago Park Commis-<br>sioners..... |                 | 1,130 57        |
| S. H. Wheeler.....                        |                 | 250 32          |
| C. J. L. Meyer.....                       |                 | 200 00          |
| North Chicago City R'y Co.                |                 | 425 00          |
| The Peshtigo Co.....                      |                 | 300 00          |
| S. Myers.....                             |                 | 1,313 77        |
| Fuller, Warren & Co.....                  |                 | 250 00          |
| Wm. D. Kerfoot & Co.....                  |                 | 611 40          |
| Julia F. Porter.....                      |                 | 185 90          |
| Chicago Canal and Dock Co.                |                 | 1,166 43        |
| Adele F. Adams.....                       |                 | 638 10          |
| Chicago & Alton R. R. Co..                |                 | 4,303 06        |
| Clara F. Bass.....                        |                 | 1,195 80        |
| Board of Education.....                   |                 | 800 00          |
| H. H. Walker.....                         |                 | 365 00          |
| H. C. Barney.....                         |                 | 741 73          |
| Percy W. Palmer.....                      |                 | 1,701 32        |
| J. Q. Adams.....                          |                 | 124 69          |
| Thomas Emery's Sons.....                  |                 | 437 70          |
| Conrad Seipp .....                        |                 | 431 00          |
| J. J. Mitchell (by E. Prus-<br>sing)..... |                 | 399 40          |
| E. A. Cummings & Co .....                 |                 | 800 19          |
| Willis G. Jackson.....                    |                 | 102 35          |
| Wm. Owen.....                             |                 | 437 55          |
| C. H. Kehl.....                           |                 | 2,518 95        |
| Baird & Bradley.....                      |                 | 1,560 40        |
| L. H. Bisbee.....                         |                 | 264 14          |
| Sawyer & Lombard.....                     |                 | 629 84          |
| Chicago & N.-W. R'y Co....                |                 | 593 25          |
| Little Sisters of the Poor...             |                 | 500 00          |
| J. U. Borden.....                         |                 | 1,000 00        |
| Carried forward,                          | \$24,429,522 92 | \$24,428,607 92 |



|                                |                 |                 |
|--------------------------------|-----------------|-----------------|
| Brought forward,               | \$24,429,522 92 | \$24,428,607 92 |
| Lawrence Ballentyne.....       |                 | 375 00          |
| Wrenches.....                  |                 | 540 00          |
| Sewerage fund.....             | 12,294 47       |                 |
| Sewers, North division.....    | 1,207,999 29    |                 |
| Sewers, South division.....    | 1,777,436 37    |                 |
| Sewers, West division.....     | 3,596,344 57    |                 |
| Pipe account.....              | 7,398 15        |                 |
| Brick account.....             | 311 60          |                 |
| Wooden covers account.....     | 3,279 44        |                 |
| Iron covers account.....       | 3,000 50        |                 |
| Cement account.....            | 106 80          |                 |
| Sand account.....              | 95 00           |                 |
| Sewer loan bonds, 4 per cent.  |                 | 458,000 00      |
| Sewer loan bonds, 7 per cent.  |                 | 1,675,000 00    |
| Sewer loan bonds, 4½ per cent. |                 | 489,500 00      |
| Sewer loan bonds canceled..    |                 | 377,500 00      |
| General taxes.....             |                 | 3,715,294 23    |
| General fund.....              | 7,126 56        |                 |
| Sewer fund suspended acc'ts.   | 111,548 77      |                 |
| Galena & Chicago Union         |                 |                 |
| R. R. Co.....                  |                 | 382 55          |
| C., B. & Q. R. R. Co.....      |                 | 6,744 01        |
| A. C. Barney.....              |                 | 700 00          |
| Turner & Bond.....             |                 | 325 00          |
| Ogden, Sheldon & Co.....       |                 | 2,392 00        |
| West Chicago Park Commis-      |                 |                 |
| sioners.....                   |                 | 8,458 07        |
| Catholic Bishop of Chicago..   |                 | 4,805 00        |
| Chicago Malleable Iron         |                 |                 |
| Works.....                     |                 | 826 05          |
| Board of Education.....        |                 | 4,677 50        |
| A. T. Ewing.....               |                 | 250 00          |
| Estate of H. O. Stone.....     |                 | 300 00          |
| Thos. Emery's Sons.....        |                 | 250 00          |
| R. T. Crane.....               |                 | 425 00          |
| Carried forward,               | \$31,156,464 44 | \$31,175,352 33 |

## BOOK-KEEPER'S STATEMENT.

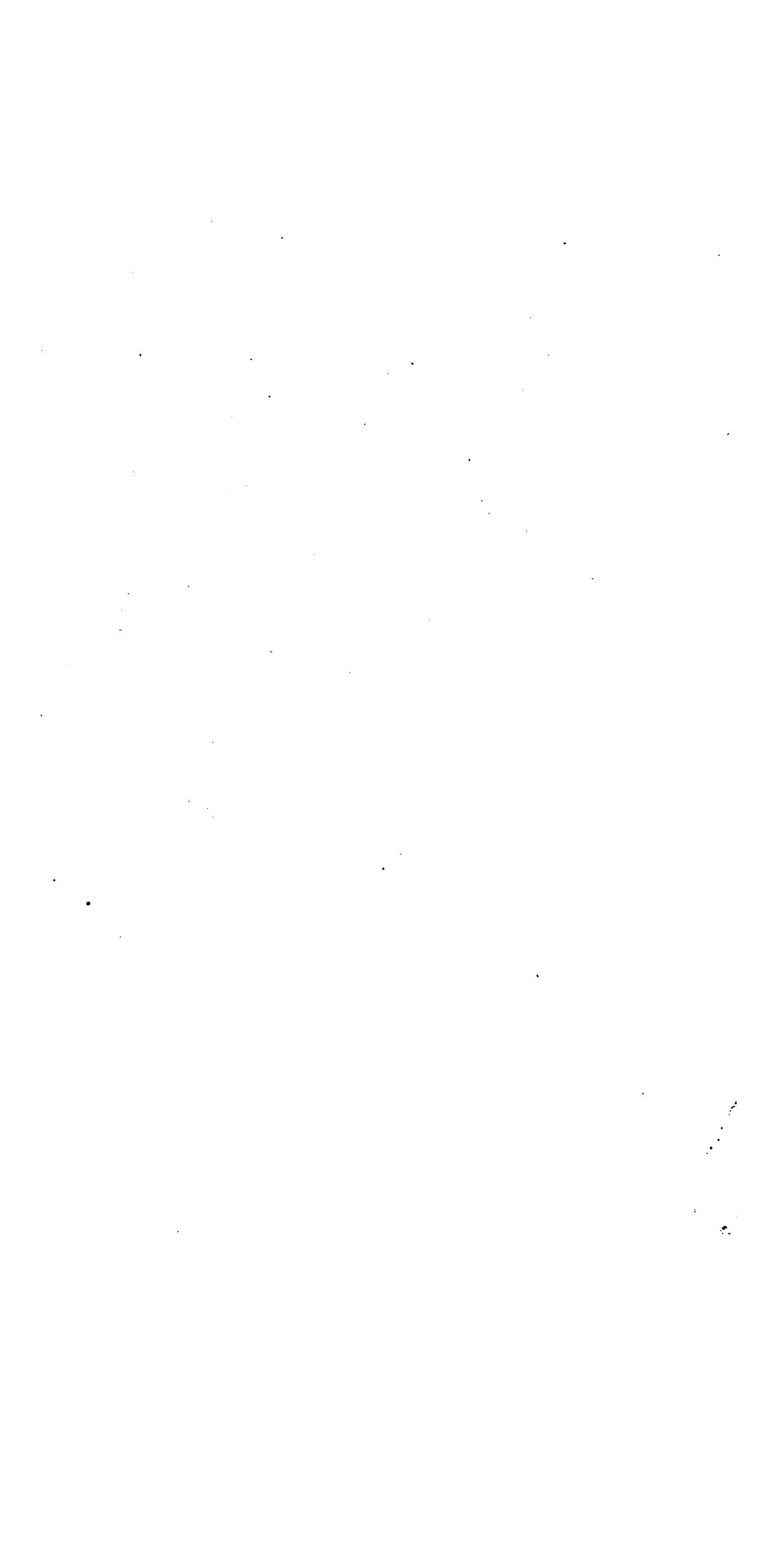
325

|  |                 |                 |
|--|-----------------|-----------------|
| Brought forward,                                     | \$31,156,464 44 | \$31,175,352 33 |
| Trustees Presbyterian The-<br>ological Seminary..... |                 | 1,397 50        |
| Porter Bros.....                                     |                 | 305 45          |
| S. E. Gross.....                                     |                 | 182 25          |
| Robert L. Martin .....                               |                 | 509 00          |
| Baird & Bradley.....                                 |                 | 2,135 00        |
| Wm. W. Phelps.....                                   |                 | 313 75          |
| Chapin & Gore .....                                  |                 | 360 00          |
| Chicago Gas-light and Coke<br>Company.....           |                 | 350 00          |
| Francis B. Little.....                               |                 | 320 00          |
| Sawyer & Lombard.....                                |                 | 850 00          |
| Seth Gage.....                                       |                 | 300 00          |
| John Carson.....                                     |                 | 100 00          |
| James W. Borden.....                                 |                 | 603 00          |
| Olaf O. Ostrom.....                                  |                 | 245 00          |
| S. H. Wheeler.....                                   |                 | 1,100 00        |
| J. L. Lombard.....                                   |                 | 300 00          |
| Wm. D. Kerfoot & Co.,<br>agents.....                 |                 | 1,412 00        |
| Lazarus Silverman.....                               |                 | 343 70          |
| Sewer maintenance account.                           | 30,014 54       |                 |
| Appropriation fund.....                              | 218,910 46      |                 |
| Sidewalks, general repairs. .                        |                 | 10,431 06       |
| Public buildings.....                                |                 | 3,138 97        |
| Public benefits.....                                 |                 | 2,425 17        |
| Special assessments.....                             |                 | 826 00          |
| Street lamps.....                                    | 3 12            |                 |
| Fullerton avenue conduit...                          |                 | 1,499 12        |
| Canal pumping works (con-<br>struction).....         |                 | 24,967 22       |
| Canal pumping works (op-<br>erating).....            |                 | 10,000 00       |
| Twelfth street viaduct.....                          |                 | 55,000 00       |
| Indiana street viaduct.....                          |                 | 10,000 00       |
| Carried forward,                                     | \$31,405,392 56 | \$31,304,766 52 |

|                              |                        |                        |
|------------------------------|------------------------|------------------------|
| Brought forward,             | \$31,405,392 56        | \$31,304,766 52        |
| Centre avenue viaduct.....   |                        | 890 00                 |
| Lake street bridge.....      |                        | 37,169 44              |
| Ashland avenue bridge.....   |                        | 5,501 08               |
| Kedzie avenue bridge... ..   |                        | 5,600 00               |
| Jackson street bridge.....   |                        | 25,000 00              |
| State street viaduct.....    |                        | 10,000 00              |
| Deering street bridge.....   |                        | 5,000 00               |
| Taylor street bridge.....    |                        | 5,000 00               |
| Webster avenue bridge.....   |                        | 5,000 00               |
| Surplus account.....         |                        | 7,447 84               |
| Stock account.....           | 5,982 32               |                        |
| City Hall fund.....          |                        | 5,328 38               |
| City Hall appropriation .... |                        | 1,616,173 31           |
| City Hall, cost of.....      | 1,621,501 69           |                        |
|                              | <u>\$33,032,876 57</u> | <u>\$33,032,876 57</u> |

Respectfully submitted,

F. C. MEYER, *Book-keeper.*









115,  
116.









BDSEP 10 1917

